FINAL
SITE SPECIFIC FINAL REPORT
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

US Army Corps of Engineers, Charleston District

Prepared By:

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APRIL 2006

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

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ABBREVIATIONS AND ACRONYMS

ASR	Archives Search Report
ATV	All Terrain Vehicle
CD	Cultural Debris
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
MD	Munitions Debris
MEC	Munitions and Explosives of Concern
Mk	Mark
MOFB	Miniature Open Front Barricade
MPA	Man Portable Adjunct
MR	Munitions Response
MRA	Munitions Response Area
MRS	Munitions Response Site
MSD	Minimum Separation Distance
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
POA	Power of Anomaly
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
SNR	Signal-to-Noise Ratio
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

ZAPATAENGINEERING, P.A. (ZAPATAENGINEERING) was tasked to perform a munitions response (MR) at three ordnance operable units (OOU) on property that was part of the Former Camp Croft, Spartanburg, South Carolina. The Task Order (14) was conducted under contract DACA87-00-D-0034 with the US Army Engineering and Support Center, Huntsville (USAESCH). The work required falls under the Defense Environmental Restoration Program (DERP) – Formerly Used Defense Sites (FUDS) program. The Scope of Work (SOW) is provided in Appendix A.

1.1 PROJECT OBJECTIVE

1.1.1 The objective of this MR is a removal action (RA) at the Former Camp Croft in Spartanburg, South Carolina. ZAPATAENGINEERING was contracted to safely locate, identify, and dispose of all munitions and explosives of concern (MEC) hazards to depth in previously identified pits within OOU 3. In addition, ZAPATAENGINEERING was also contracted to locate, identify, and dispose of all MEC hazards to depth associated with mapped anomalies within the clearance areas. Although OOUs 11C and 11D were part of this project's SOW; they were not funded, and will therefore not be covered in this report.

1.1.2 The initial Task Order award was for the intrusive investigation of several previously identified pits located within Grids 17 and 40 of OOU 3. ZAPATAENGINEERING was also directed to re-map Grids 17 (1.082 acres), 40 (0.854 acres), and 35P4 (0.657 acres), using digital geophysical methods for Quality Control (QC), while also verifying that removal activities were complete within the pits and grids prior to the Government's Quality Assurance (QA) activities. Refer to Appendix B for a map indicating the location of Grids 17, 40, and 35P4 of OOU 3. If additional anomalies were identified after geophysical mapping, the anomalies were to be intrusively investigated prior to relinquishment of the grids for the Government for QA procedures.

1.2 PROJECT AUTHORITY AND GENERAL GUIDANCE

1.2.1 The work required under this SOW falls under the DERP and the FUDS programs. MEC may exist on property that was formerly owned, used, or controlled by the Department of Defense (DOD).

1.2.2 Since MEC is a safety hazard and may constitute an imminent and substantial endangerment to site personnel and the local population, certain provisions of 29 CFR 1910.120 are applicable. During this RA, it was the Government's intent that ZAPATAENGINEERING destroy all MEC encountered on the site. ZAPATAENGINEERING's performed this work 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 were conducted in full compliance with USAESCH, United States Army Corps of Engineers (USACE), the Department of the Army (DA), and the DOD safety requirements regarding personnel, equipment and procedures and resulted in on-site destruction of UXO. Additionally, 29 CFR 1910.120 applied to all actions taken at this site.

1.3 SITE DESCRIPTION

The former Camp Croft is located five miles southeast of Spartanburg, South Carolina. OOU 3 encompasses approximately 48 acres comprised of the Wedgewood Subdivision, a private residential area, and a nearby golf course. OOU 3 areas of concern include approximately 24 acres, while areas of concern in OOU 11C and OOU 11D encompass approximately 9.48 acres and 11.2 acres, respectively. A map (Figure B-4) of the Camp Croft munitions response area (MRA) depicting the locations of each munitions response site (MRS) is included in Appendix B.

1.4 SITE HISTORY

1.4.1 On November 4, 1940, the War Department announced that a new training center would be located in Spartanburg County, South Carolina. Camp Croft Infantry Replacement Training Center (IRTC) was officially activated on January 10, 1941, with housing for 20,000 trainees and support personnel. Camp Croft IRTC consisted of two general areas: a series of firing ranges and a troop housing area with attached administrative headquarters. Camp Croft IRTC served as one of the Army's principal IRTCs where approximately 250,000 soldiers were trained. Camp Croft was also a prisoner of war camp during World War II. The installation was declared surplus to the Army's needs in November 1946 and excessed to the War Assets Administration in 1947.

1.4.2 The former Camp Croft was used for a variety of different purposes. It had at least eleven live ammunition-training ranges used for small arms ammunition, anti-tank rockets, anti-aircraft artillery, 60-millimeter (mm) infantry mortars, and 81 mm infantry mortars. The training range impact areas comprised a total of 16,929 acres.

1.4.3 OOU 3 is located in the former cantonment area, north of the current Camp Croft State Park Natural Area. Practice grenades and munitions debris (MD), including 2.36-inch rocket fragments that may represent 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. This suggests that this area may have been a former hand grenade practice area. The previous work areas investigated by UXB International, Inc. (UXB) are identified in the Final Removal Report dated April 2001. This 2001 report states that three small pits in Grid 17 and one small pit in Grid 40 remain to be cleared (overall grids were previously mapped using digital geophysical methods and intrusively excavated). Although twelve M15 white phosphorous (WP) grenades were excavated from one of the pits in Grid 17, and 150 pounds of smoke canisters were excavated from the pit in Grid 40, additional intrusive activities were halted to reevaluate safety measures and develop proper procedures to be implemented prior to continuing with the excavations.

1.4.4 Currently, 7,088 acres of land comprise Camp Croft State Park Natural Area, 4,936 acres are used for farming, and 256 acres are used by private industry, while 6,764 acres constitute private residential property.

1.5 TECHNICAL INSTRUCTION

ZAPATAENGINEERING conducted the RA under contract to the USAESCH, from January 2005 until February 2005. ZAPATAENGINEERING worked in close coordination with the USAESCH while developing the project scope, work plan, Explosive Safety Submission, technical directives, and executing the removal. The USAESCH Task Order SOW outlined the USAESCH guidance for the overall project effort, which was completed in accordance with the 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). Additional fieldwork was executed during January 2006 in order to satisfy requirements of the SOW.

1.6 TECHNICAL SCOPE AND APPROACH

As the prime contractor, ZAPATAENGINEERING utilized a team approach drawing on in-house and subcontracted expertise to conduct the site preparation, brush clearance, and topographic surveys. In addition, the team conducted geophysical operations, anomaly re-acquisitions, intrusive anomaly removals, QC checks, scrap management and site restoration within the grids at the former Camp Croft.

1.6.1 Project Team Organization

Project-specific personnel critical to the work site and their responsibilities while on-site are described in detail below. Personnel on the site for various activities are listed in Table 1-1.

1.6.1.1 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.

1.6.1.2 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.

1.6.1.3 UXO Quality Control Specialist (ZAPATAENGINEERING)

Through the duration of fieldwork, Mr. Herman Linker 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. During the January 2006 fieldwork, Mr. Glen T. Farmer fulfilled the QC responsibilities.

1.6.1.4 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.

1.6.1.5 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.

1.6.1.6 UXO Technicians

A number of UXO Technicians were involved in the reacquisition of geophysical targets; intrusive operations; MEC removal and/or disposal; and investigation of eight suspected burial pits. These individuals included Rick Funk (Tech III), Daney Gipson (Tech III), Rob Yates (Tech III), Rick White (Tech II), Mick Doak (Tech II), Phil Kendall (Tech II), John Fox (Tech II), Joel Morrell (Tech II), Glen Childers (Tech II), Bryce Vroman (Tech I), and Norm Schwalm (Tech I). 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. In addition, Anthony Locklear (equipment operator) was on site during the burial pit investigations.

1.6.1.7 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.

1.6.1.8 Geophysical Mapping and Reacquisition (NAEVA Geophysics)

Anthony Jones and Rob Bulford of NAEVA Geophysics conducted digital geophysical data collection. Their responsibilities included establishment of the geophysical survey area within grid boundaries, collecting grid data, maintaining geophysical equipment and transferring data to their respective offices for processing. While onsite, the geophysical survey team reported to the ZAPATAENGINEERING Senior Geophysicist.

1.6.1.9 Surveyor (B. P. Barber)

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

1.6.1.10 Mechanical and Manual Brush Removal (ZAPATAENGINEERING)

Messrs. Terry Farmer, Nate Reel, Brad Kuntz, and two local hires from a temporary employee agency provided brush removal for the wooded areas in Lots 35P1, 35P3, 35P4, 40, and 40P.

TABLE 1-1 PROJECT PERSONNEL ROLES AND PARTICIPATION

PERSONNEL	ROLE	SITE PREP BRUSH REMOVAL	MAG & FLAG REMOVAL	GEOPHYSICAL – MEC REMOVAL		SCRAP MANAGE	SITE RESTORE
				EM-61 SURVEY	REACQUISITION & REMOVAL		
US Army Engineering and Support Center, Huntsville (USAESCH)							
Plyler McManus	Project Manager						
Brendan Slater	Project Manager						
Mike Slovak	Safety Officer		*		*	*	*
Walt Zange	Safety Officer		*		*	*	*
Dan Plugge	Technical Manager						
ZAPATAENGINEERING, P.A.							
Suzy Cantor-McKinney	Program Manager						
Jeff Schwalm	Project Manager	*	*	*	*		
David Smith	Senior Geophysicist			*	*		
David Wolf	Project Scientist				*		
Derek Anderson		*		*	*		
Nate Reel		*		*			
Doug McCue	SUXOS	*	*		*	*	*
Terry Farmer	UXOSO	*	*	*	*	*	*
Herman Linker	UXOQCS	*	*		*	*	
Rick Funk	UXO Tech III	*	*		*	*	
Daney Gipson	UXO Tech III	*	*		*	*	
Rob Yates	UXO Tech III	*	*		*	*	
Mick Doak	UXO Tech II	*	*		*	*	
Joel Morrell	UXO Tech II	*	*		*	*	
Glen Childers	UXO Tech II	*	*		*	*	*
Rick White	UXO Tech II	*	*		*	*	
John Fox	UXO Tech II	*	*		*	*	
Phil Kendall	UXO Tech II	*	*		*	*	

PERSONNEL	ROLE	SITE PREP BRUSH REMOVAL	MAG & FLAG REMOVAL	GEOPHYSICAL – MEC REMOVAL		SCRAP MANAGE	SITE RESTORE
				EM-61 SURVEY	REACQUISITION & REMOVAL		
Bryce Vroman	UXO Tech I	*	*		*	*	
Norm Schwalm	UXO Tech I	*	*		*	*	
Anthony Locklear	Equipment Operator	*	*		*		
BP Barber							
Johnny Kinsey	Lead surveyor						
NAEVA Geophysical Services							
	Geophysics Manager						
Anthony Jones	Geophysicist			*	*		
Rob Bulford	Geophysicist Tech			*	*		

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

2.0 MEC INVESTIGATION AND REMOVAL

2.1 PROJECT BACKGROUND

2.1.1 Physical Site Information

ZAPATAENGINEERING was tasked to perform a MR removal action at three OOU's on property that was part of the Former Camp Croft, Spartanburg, South Carolina. The work falls under the DERP and FUDS programs. The SOW is provided in Appendix A.

2.1.2 Topography

OOU 3 is situated on mixed-use areas. The ground slope varies from gently rolling and relatively level among the residential lots to fairly steep slopes at the edges of fairways and near the creek.

2.1.3 Geology

The former camp is located on a clearly discernable high-magnetic response feature depicted on the aeromagnetic map of the area (U.S. Geological Survey Map GP-951). Spatially variable magnetic susceptibility in the soil and underlying weathered rocks derived from this intrusive 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.

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. Historic records to 1968 indicate an average annual relative humidity of approximately 70 percent, with precipitation ranging from 1/10 inch (about 76 days/year) to one inch or more of rain (approximately 14 days/year). The highest recorded annual rainfall was 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

Vegetation varies from wooded to open areas. The wooded areas are primarily comprised of hardwoods, with some pines and undergrowth. The amount of vegetation varied from dense undergrowth (60%) to sparse growth (40%). Underbrush was removed from the wooded areas identified for this removal action by the mechanical and manual grubbing equipment supporting field operations.

2.1.6 Site Utilities

Although there were a number of site utilities associated with the residence on Lot 17 that interfered with geophysical data collection, anomaly reacquisition, or intrusive operations, activities in all other areas were not affected. These utilities were identified using the local utility locating service.

2.1.7 Overall Site Accessibility and Impediments

Site accessibility was normally unimpeded through the duration of the project. Traffic control, public and media interest, and activities involving the partially open golf course caused delays throughout the course of the project, which were generally short in duration.

2.2 AREAS OF INVESTIGATION

The areas of investigation were composed of seven surveyed grids varying from unimproved wooded areas to landscaped golf course and residential areas. All grids were geophysically mapped. NAEVA Geophysics and ZAPATAENGINEERING selected target anomalies in each grid for intrusive investigation . The target anomalies 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 and dig technique. A previous contractor identified and surveyed the locations of four suspected burial pits within two of the grids. ZAPATAENGINEERING re-located these pits for the current investigation.

2.3 MAJOR WORK STAGES

Site work consisted of several stages:

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

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. MD was managed throughout the duration of the project, with the metal sealed in thirty-gallon buckets, secured using numeric seals and stored in a locked on-site bunker. Each of the work stages is described in detail below.

2.3.1 Site Preparation

ZAPATAENGINEERING established an office trailer equipped with multiple phone lines and electrical power to support its field team, the USAESCH Safety Specialist and subcontractors on the Former Camp Croft property. An explosives vendor delivered explosives on an "as needed" basis. In addition, the Spartanburg County Sheriff's Department provided support as per the Work Plan. The MD/equipment storage facility was located adjacent to the office trailer.

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. While on-site, UXO technicians escorted survey personnel. Survey data are included in Appendix C.

2.3.1.2 Brush Clearing Operations

Tree and brush removal was required in Grids 35P1, 35P3, 35P4, 40, and 40P to support the geophysical survey effort and subsequent MR removal action. During the brush removal operations, a brush clearing team utilized mechanical equipment to cut and remove brush, small trees, and large fallen trees. Although effective, brush removal was slow in areas of thicker brush. The density of large trees and a lack of access from the golf course and private property precluded the utilization of mobile mechanical clearing equipment.

2.4 GEOPHYSICAL INVESTIGATION, REACQUISITION, REMOVAL

2.4.1 Geophysical Prove-out

2.4.1.1 A geophysical prove-out (GPO) was performed by NAEVA Geophysics in October and November 2004, as described in the Geophysical Prove-out Letter Report (Appendix D1). The GPO demonstrated the Geonics wheel-mounted EM-61 Mk II metal detection system operating with a 1.5 foot line spacing as the most effective, efficient method to identify Mk II hand grenades buried at the Former Camp Croft.

2.4.1.2 An additional GPO survey was conducted September 2005, with a USAESCH representative providing approval and oversight.

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 measures necessary to achieve the objectives of the DGM effort involved determining acquisition parameters during the GPO, adherence to DID OE 005-05.01 Attachment B, and following quality control procedures established during discussions between USAESCH and ZAPATAENGINEERING. The basic specifications developed in the GPO included a tight line spacing of 0.5m or 1.5 ft, with data spacing along lines as specified in the Work Plan. After documentation of data gaps, DGM maps were made available to HHI/dig teams for resolution of gaps sufficiently large to contain an anomaly. Parameters that are helpful in defining and quantifying data quality on grids or transects are listed on DGM Control Sheets. One sheet exists for each grid or transect, or selected group thereof. A listing of each parameter is followed by a column indicating the QC test or procedure, the frequency at which it was applied, and the metric to be met by the data. Metrics 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. The DGM Quality Control Sheets are included in Appendix F.

2.4.2.2.2 Some spaces on a few DGM QC sheets were inadvertently left blank. All QC sheets have been examined for this report and the acceptability of the data is validated from the other entries. For example, on page F3-53, Pass QC Y/N is blank. Although a Y clearly should have been entered, there were no data gaps in the grid. However, on page F3-93, Items 3 and 4, there should have been a notation that in this area (P-40), a portion of the grid was mostly a pit with abundant debris and metal clutter. The area was swept by mag/dig even though some discrete targets were investigated. On page F3-98, Item 4 Pass/Fail should have an N/A, (not applicable). The gaps were checked with follow-up measurements, and all gaps were swept in any case. In other instances, the notation N/M means not measured.

2.4.2.2.3 Summary of QC outcomes/results. 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. Most terrain was consistently moderate; areas that were too rough for proper QC were noted and addressed by HHI/dig methods. No grids were passed from QC to QA without resolution of metric failures and confidence in results of investigations. There were no QA failures.

2.4.2.3 Data Acquisition

2.4.2.3.1 The digital geophysical mapping (DGM) investigation was conducted from November 20 through December 3, 2004 using an EM-61 Mk II time-domain electromagnetic metal detector selected in the GPO process. The grids, as identified within the SOW, that lie within Camp Croft OOU3 are situated around residences and a golf course. DGM within these areas was organized into seven 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), to which he had access, within the boundary of these polygons. There were no rights-of-entry to grid corners outside the polygons. Consequently, ZAPATAENGINEERING and NAEVA field crews, using survey tape and line from PLS-surveyed corners, established location control for non-PLS surveyed grid and partial-grid corners in order to conduct the DGM. 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. At some locations, difficult terrain and other factors required shorter fiducial separation to accommodate changes in the EM cart speed.

2.4.2.3.2 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 Each day, a location free of subsurface metal and near the survey area was designated as a calibration point for the EM-61 Mk II. A morning vibration test was preformed each day 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 later downloaded into a laptop computer for on-site review and editing. The data positioning was corrected with Geonics DAT61Mk II software, 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. The resultant reductions in amplitude were slight and were not sufficient to affect anomaly selections. 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. The data were displayed on the screen in gridded and pixel format. Data for Channels 1, 2, 3 and the SUM 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; the gridded responses for Channels 1, 2 and 3 were also reported for the targeted locations. Initially the target selection threshold was set on a grid-by-grid basis using the statistical process described in the GPO report. The dig sheets for these grids also included a signal-to-noise ratio (SNR) calculated using the local statistical background noise level. After processing the initial data sets, modifications were made to decrease overall processing time. Several statistical calculations were discontinued, a fixed threshold of 5 mV in the SUM channel was used, and the SNR was no longer calculated. These conventional processing procedures yielded more than 1000 targets per acre, many of which may have been caused by geology. Additional profile analysis reduced the total number of potential MEC targets by visual qualitative classification; the selected targets were then ranked by the likelihood of being MEC. The method, however efficiently and well done, clearly would not discriminate the number of targets in sufficient time to meet the field schedule required, and was not likely to discriminate adequately the total number of targets. The schedule constraints clearly indicated the need for an alternative approach, which is discussed below under soil-metal discrimination.

2.4.10 Local Coordinate to UTM Conversion

Data were converted from local grid coordinates to UTM coordinates using fixed control points at the corners of each grid to re-project the data. Surveyed UTM coordinates for the corners of the 100 x 100 foot sub-grids were provided by ZAPATAENGINEERING. These grid corners served as the control points for the coordinate conversion. The data and target list were re-projected from local coordinates in feet to NAD83 UTM Zone 17N in meters.

2.4.11 Preparation of Geophysical Maps and Target Lists

Geophysical color 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 geo-referenced 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, channels (and SNR for several grids) and comments (e.g., known cultural features).

2.4.12 Soil-Metal Discrimination (Chi-Squared) Analysis

In areas exhibiting highly variable magnetic soil response, Chi-Squared (Chi^2) analysis is a useful discrimination tool for reducing the number of identified targets. Chi^2 analysis removes anomalous features that decay like magnetic soils across the time gates measured by the EM-61 Mk II. The results from conventional processing indicated that the large number of conventional targets could be discriminated by application of the Chi^2 soil-metal algorithm. After the final target lists generated through conventional processing were submitted, Geophysical Associates (GPA), under sub-contract by NAEVA Geophysics, performed Chi^2 analysis of the data using proprietary Chi^2 Soil-Metal Discrimination software. Chi^2 data processing at Camp Croft included the following steps:

- Export raw (wheel-mode) data from Geosoft database to ASCII xyz format;
- Auto-level raw data to remove broad soil background response and drift:

- Perform discrimination analysis (measure Chi2 difference with respect to magnetic soil);
- Import Chi^2 ASCII xyz data into Geosoft;
- Selection of targets for intrusive investigation.

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. Substantial target reduction was achieved, while target lists containing uniquely identified Chi^2 selected targets were generated. Some 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 that were high priority by profile selection, but not Chi targets. This was accomplished by merging of the conventional processing and Chi^2 target lists by ZAPATAENGINEERING.

2.4.14 Selection of Targets for Intrusive Investigation

2.4.14.1 Although the Scope of Work dated January 15, 2005 directed ZAPATAENGINEERING to investigate 379 anomalies per acre, the actual number of anomalies identified in the field exceeded the number cited in the SOW. During discussions between ZAPATAENGINEERING and the USAESCH, it was agreed that ZAPATAENGINEERING would implement a strategy prioritizing anomalies in order to optimize target selection to meet acceptance criteria. Initially, starting about December 8, 2004, targets were selected using Oasis target selection software and by NAEVA geophysicists examining spatial aspects. In addition, profiles were analyzed in order to judge anomaly similarity to GPO results. The prioritization protocol evolved, as ZAPATAENGINEERING initially prioritized the targets by threshold. As a result of discussions with USAESCH in mid-December 2004, detailed profile analysis in which anomaly wavelength, presence on two or more lines, shape, apparent (visual) decay characteristics and signal-to-noise ratio (SNR) were used in selection. Targets were listed in the order of likeliness that the respective, corresponding anomalies actually represented MEC items. This order ranged from items most likely to be MEC (Priority 1), to those least likely to be MEC (Priority 3). The number of non-metal digs was reduced appreciably with this refinement of the selection technique. Chi^2 target selections were delivered from NAEVA, and on January 17, 2005, combined Sum/Chi target lists were provided to the dig teams. These targets were tabulated on lists, with Priority 1 targets listed first. A selection of Chi^2 targets prioritized by Chi^2 amplitude was then added to the list.

2.4.14.2 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 by Dr. Ware of GPA 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. As targets were dug and dig sheets analyzed it was seen that approximately 74% of Chi2 targets were metal. Target lists after that time consisted of all the Chi^2 targets plus a selection of the Priority 1 targets that were not Chi^2 targets. The result was an increasingly high proportion of metallic items in the dig results as these techniques evolved. Compared to conventional processing including profile analysis, our observations of Chi^2 processing were correct. However, the Chi^2 process will not detect every piece of metal or detect 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.

2.4.14.3 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 the level of Chi response for selected targets. This facilitated the UXO team in thorough investigations of anomalies to ensure bottle caps and hot rocks weren't documented as the target anomaly. However, further analysis of the Chi^2 processing technique used for Croft I 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. As seen in Appendix F5, several Chi^2 anomalies resulting in geologic responses were revisited, verifying that geologic response was indeed an anomaly source. Recent Chi^2 processing results from Hawaii indicate that some large amplitude discrete anomalies actually result from soil and/or magnetic rock.

2.4.15 Anomaly Discrimination with Power of Anomaly (POA)

2.4.15.1 Additional analysis was performed to detect metal missed by Chi^2 prior to a second phase of fieldwork. 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.

2.4.15.2 The POA is calculated from the intensity and the aerial/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 amplitude of the anomaly decreases as the spatial size increases. Thus, the POA should remain in a constant range.

2.4.15.3 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.

2.4.15.4 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

2.4.15.5 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.

2.4.16 Anomaly Reacquisition

2.4.16.1 Objectives

2.4.16.1.1 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.

2.4.16.1.2 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.

2.4.16.1.3 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.

2.4.16.1.4 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) 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 commensurate with the response from the initial survey. Because targets were reacquired with Channel 1, response typically could be half the mV value of a Sum response, so successful reacquisition amplitudes were usually lower than initial response. If the original response were large, the Channel 1 response would be expected to be large, relative to the local background. Reacquisition was methodical and slow for optimal SNR. NAEVA personnel recorded the Channel 1 response of all reacquired targets. 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. 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. Spray paint was used to identify the original and final locations of all targets on the ground. If the target needed to be relocated, a small dot of spray paint was used to paint the original X and Y of the anomaly, and a large dot of paint was marked on the ground to identify the target's final location. 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.

2.4.16.1.5 During the initial phase (until 23 January 2005) anomalies were reacquired with an EM-61 as detailed above. NAEVA demobilized with the EM-61 because of the minimum separation distance between the UXO teams and geophysical team. Good positioning, evident by minimal offsets, led to relocating the remaining targets by tape and line, and then reacquisition with analog instrumentation. Approximately sixty percent of all Phase I targets were reacquired with the EM-61. The remaining forty percent were reacquired with analog instrumentation.

2.4.16.1.6 A second phase of fieldwork was conducted in January 2006, in which additional anomalies were investigated. During the second phase of fieldwork, targets were relocated by a PLS then reacquired using the same technique as above, but with analog instrumentation.

2.4.16.1.7 In addition to the above referenced QC of reacquisition values; QC of dig results and anomaly revisits is documented in Appendix F4. 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 the January 2006 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 investigate 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 QC 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.

2.4.16.2 QC Process

Reductions in 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 F. Note that not all anomalies have reacquired amplitudes.

2.4.16.3 Single Point Anomalies/Mag and Dig Investigation

2.4.16.3.1 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. 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. 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. Fisher EM devices were used to investigate targets at locations where Schonstedt® instruments had not been successful in reacquiring initial sources of anomalous response, and upon completion of an excavation and recording of data. By using dual instrumentation, ZAPATAENGINEERING achieved the greatest possible per-target confidence that each source of an anomalous response was either excavated, or otherwise explained. Grid data sheets were consulted to determine the maximum amplitude data for each contact. Target selections were reviewed by NAEVA Geophysics and ZAPATAENGINEERING and were intrusively investigated by the UXO teams.

2.4.16.3.2 Under the guidance of the SUXOS, a five-man team and a four-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 or the Fisher EM, 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.

2.4.17 Summary of DGM Results

2.4.17.1 Numerous Priority 1 anomalies were not investigated because of the SOW-prescribed limited number of anomalies and time constraints imposed by the lease of the golf course. Because of the presence of magnetically responsive soil at this site, the removal effort was forced into an incremental program of increasingly detailed data processing. As initial data were acquired, it became apparent that highly magnetic soil, characteristic of this area, produced an excessive number of anomalies that could be interpreted as MEC-like targets. As a result, ZAPATAENGINEERING increased processing and interpretation efforts, resorting to detailed profile analysis to distinguish actual MEC items from magnetic soil response. Although the outcome was a reduced number of soil response anomalies, the degree of reduction was not sufficient to allow on-schedule completion of the removal action. To solve this dilemma, ZAPATAENGINEERING turned to Geophysical Associates' Soil/Metal discrimination Analysis algorithm, with the result that metal (MEC-like) dig results increased significantly relative to soil response. However, Phase I results indicated that Chi^2 processing did not detect metal items at certain orientations. In an effort to detect metal missed by the Chi^2 analysis, the Power of Anomaly analysis was employed. Target lists evolved from conventionally derived targets (from the sum of the first three EM-61-Mk2 channels), to those resulting from detailed profile analysis, to Chi^2 targets added to the sum targets, to Chi^2 targets as the first-listed targets supplemented with Sum Priority 1 targets, and finally Sum targets qualified as Priority 1 based on the Power of Anomaly analysis. As stated, numerous anomalies currently classified as Priority 1 were not investigated; a table of outstanding Priority 1 anomalies is in Appendix F4. Anomaly prioritization evolved throughout the investigation as summarized in Table 2-2, below.

TABLE 2-2 ANOMALY SELECTION CRITERIA EVOLUTION

DATE	SELECTION CRITERIA
01/04/2005	• Initially, anomalies were prioritized based on spatial location, profile characteristics, discreteness, symmetry, and mV response.
01/17/2005	• Additional anomalies were selected based on the Chi^2 analysis with a threshold of 2mV.
01/16/2006	• During a second phase of fieldwork, additional Chi^2 anomalies that were not previously investigated were selected for investigation in GC2, 40P1, 35P1 – 35P3, 35P4 • Power of Anomaly (POA) values were calculated for selected conventional targets. All conventional targets within Polygons

DATE	SELECTION CRITERIA
	35P1, 35P3, 35P4 with a Sum of Signal Squared threshold above 2000 and SNR threshold above 110 were selected for intrusive investigation. Because ZAPATAENGINEERING was scoped for a limited number of digs, approximately 100 of over 900 qualifying POA anomalies were selected. Rather than digging a sample of these targets over the entire site, the digs were concentrated in Polygons 35P1, 35P3, 35P4 in an effort to clear the polygons. • Polygons 17 and 40 were not investigated further because of landscaping and construction activity invalidating geophysics.
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, in an effort to capture other similar items. While the threshold was lowered, these targets were not investigated due to SOW constraints.

2.4.18 Croft Phase I: Analysis of Dig Results Prior to January 15, 2005

An analysis was conducted to aid in the anomaly selection process. Table 2-3 summarizes a comparison of the conventional target dig results and those with an associated Chi^2 selection. The complete table of anomalies with dig results can be seen in Appendix F4. Initially, all targets were selected based on conventional means.

2.4.19 Croft Phase I: Analysis of Dig Results After to January 15, 2005

After January 15, 2005 targets were also selected using Chi^2 analysis. ZAPATAENGINEERING conducted a Chi^2 analysis on the anomalies investigated prior to January 15, 2005 to reduce the number of geologic responses, as required by the SOW dated January 15, 2005. This analysis compares anomalies dug as conventional targets and those selected as Chi^2 targets. It is important to note that the conventional target location was the basis of the search radius, and that the associated Chi^2 target could be up to 0.5 meters away. Since the Chi^2 target location was not the basis for relocation, the associated Chi^2 anomalies may not have been investigated to the full extent, as were later Chi^2 targets. Approximately 10% of the Chi^2 targets resulted in magnetic geologic items, compared to 30% for conventional target selections. By using Chi^2 processing, geologic response was reduced by approximately 30% from that seen in conventional processing. Chi^2 was slightly better at finding metal; 67% of the conventional targets resulted in metal, while 74% of the Chi^2 targets resulted in metal. However, Chi^2 selected about half as many targets as the conventional method, and about half the amount of metal. Up to January 15, 2006, a total of three munitions debris items were found by both methodologies. Although geologic response was reduced using the Chi^2 analysis, the reduction may have been greater considering the positioning and investigation changes that occurred after January 15, 2005. Further, some conventional digs resulting in metal, which were not identified as Chi^2 anomalies, were present in the Chi^2 data, but at low mV values.

TABLE 2-3 CONVENTIONAL- CHI^2 TARGET ANALYSIS SUMMARY

TARGET SELECTION METHOD	TARGETS RESULTING IN GEOLOGY	TARGETS RESULTING IN METAL	TOTAL TARGETS DUG	% TARGETS RESULTING IN GEOLOGY (BY METHOD)	% TARGETS RESULTING IN METAL (BY METHOD)	% OF TOTAL MD (BOTH METHODS)
Chi^2	33	117	158	10% (33 of 158)	74% (117 of 158)	100% (3 of 3)
Conventional	94	212	318	30% (94 of 318)	67% (212 of 318)	100% (3 of 3)

2.4.19.1 Burial Pit Investigations

2.4.19.1.1 ZAPATAENGINEERING was contracted to investigate three suspected burial pits in an area of Grid 17, where a previous contractor located M15 WP grenades. Three additional pits were suspected in the same vicinity, following the geophysical survey. Engineering controls were employed, consisting of a metal canopy covered with a non-flammable tarpaulin over the pit, and vertical aluminum barricades with an opening on one side surrounding the pit. The side opening was just wide enough to allow personnel and equipment access. Under the guidance of the SUXOS, a dig team consisting of two UXO technicians and an equipment operator conducted the subsurface removal and inspection of intact M15 grenades and/or MD. This team completed work in all but one pit, which contained several large "hot" rocks. Excavation spoils were placed on geotextile fabric to prevent the spread of contamination, if present. ZAPATAENGINEERING was contracted to dispose of any live Mk II hand grenades it found, while the Spartanburg County Sheriff's Department agreed to dispose of all M15 incendiary grenades. In each case of incendiary grenade discovery, the grenade began smoking after removal from the excavation. Upon detection of the smoke, the incendiary grenades were immediately placed in a bucket of water, pending disposal on golf course property by the Sheriff's Department. Twenty-two M15 WP grenades were turned over to the Sheriff Department as outline in the Work Plan for disposal. Each pit was excavated to native soil and passed respective ZAPATAENGINEERING QC and government QA inspections before being back-filled.

2.4.19.1.2 ZAPATAENGINEERING was also tasked with the excavation of a burial pit in Grid 40, where 105mm smoke canisters were located by a previous contractor. Since no explosive items were suspected, a 200-foot MSD that did not involve engineering controls was established. A dig team consisting of two UXO technicians and an equipment operator conducted the subsurface removal and inspection of cultural debris (CD) and MD, under the guidance of the SUXOS. Excavation spoils were placed on geotextile fabric to prevent the spread of contamination, if present. The pit was excavated to the native soil horizon, and passed respective ZAPATAENGINEERING QC and government QA inspections. Fieldwork involving investigating pits and single point anomalies, and mag and dig operations concluded on 3 February 2005.

2.4.20 Scrap Management

MD certification was an ongoing process throughout the project duration, with all MD inspected before removal from the site. The UXO Technicians, SUXOS and UXOQC/SO, conducted a four-step visual inspection process to confirm that all MD was free of any explosive contamination and/or explosive residue. Six 30-gallon barrels of MD, with an aggregate weight

of approximately 622 pounds, were certified, sealed, and secured with a serialized seal. The SUXOS coordinated removal of all MD by Arrow Steel of Spartanburg, South Carolina for ultimate disposal by smelting at a steel mill. A Department of Defense (DD) Form 1348-1A was completed for each respective container before its 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

The Spartanburg County Sheriff Department Bomb Squad, with the assistance of the State Law Enforcement Division, disposed of live ordnance items encountered during the removal action. With the exception of two items deemed unsafe to transport, all ordnance was transported and detonated off-site. All recovered live ordnance items consisted of intact or partial M15 WP grenades. Details of the disposition of all MEC items are included in Appendix I3.

2.6 PROJECT QUALITY CONTROL

ZAPATAENGINEERING performed QC checks on all phases and all 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 field QA. ZAPATAENGINEERING's Senior Geophysicist performed independent analyses of the geophysical data collected and processed by NAEVA Geophysics, reviewing prioritized target lists, and responding to feedback from the field to address data gaps and anomaly reacquisition issues. The Senior Geophysicist designed the geophysical prove-out plot to include a "blind test" for NAEVA by burying items with the location unknown to the geophysical teams. In addition, the Senior Geophysicist was onsite during the prove-out and during the geophysical data collection by NAEVA. After removal of the selected targets and the suspected burial pits, and excavation to the native soil horizon, ZAPATAENGINEERING's UXOQC Officer inspected each grid. In addition to ensuring excavation of each grid to USAESCH standards, the ZAPATAENGINEERING QC process included periodic review and evaluation of project documentation, equipment serviceability and other areas at the request of project managers.

2.6.1 MEC Summary

2.6.1.1 Phase I: January 2005

2.6.1.1.1 Single Point Anomalies

ZAPATAENGINEERING performed 1,630 subsurface digs in the clearance area, in accordance with the SOW. The investigation resulted in the destruction of a total of 2 UXO items by the Spartanburg Sheriff's Department. Figure B-2 depicts the pattern of investigated anomalies. Daily SUXOS reports documenting site activities are included in Appendix G. Copies of USAESCH Form 948 are in Appendix F. Explosives documentation is included in Appendix I. UXO items were destroyed by detonation.

2.6.1.1.2 Burial Pits

ZAPATAENGINEERING excavated eight burial pits throughout the project site in accordance with the Revised Scope of Work. The investigation resulted in the destruction of a total of 22 UXO items by the Spartanburg Sheriff's Department. Condensed daily SUXOS reports documenting

site activities are included in Appendix G. Copies of USAESCH Form 948 are contained in Appendix F. Explosives documentation is included in Appendix I.

2.6.1.2 Phase II: January 2006

2.6.1.2.1 Single Point Anomalies

ZAPATAENGINEERING performed approximately 274 subsurface digs in the clearance area, in accordance with the SOW. The investigation resulted in the destruction of one UXO item by the Spartanburg Sheriff's Department. Figure B-2 depicts the pattern of investigated anomalies. Daily SUXOS reports documenting site activities are included in Appendix G. Copies of USAESCH Form 948 are in Appendix F. Explosives documentation is included in Appendix I. UXO items were destroyed by detonation.

2.6.1.2.2 Re-Investigation of Targets

Thirty-four anomalies were flagged for reinvestigation during a second phase of fieldwork, because they initially resulted in no contacts, or non-agreement. The results can be seen in Appendix F5. All twenty-one anomalies classified as not having agreement between the interpreted response and the dig results were flagged reinvestigation. Appendix F4 contains a table of anomalies flagged for reinvestigation that were not reinvestigated. Priority 1 anomalies and Chi^2 anomalies have been accepted (QC agreement= "Yes") when the dig results stated either a geologic source (e.g. "hot dirt", "geology/geologic", "rocks", "soil") or a very small metallic source was the cause of the anomaly. As discussed in Section 2.4.14.3, the Senior Geophysicist explained to the SUXOS and Project Manager the capabilities of Chi^2 processing and that the confidence level is high that there is significant metal associated with the level of Chi response for selected targets. Further study of the Chi^2 results showed some geologic responses in the data. It is important to note that while the Chi^2 analysis did successfully reduce the geologic response, geologic response was not eliminated. As seen in Appendix F5, several Chi^2 anomalies resulting in geologic responses were revisited, verifying that geologic response was indeed the anomaly's source. Recent Chi^2 processing results from Hawaii indicate that some large amplitude discrete anomalies actually result from soil and/or magnetic rock.

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 - MD 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
- Appendix K - Cost Breakdown Summary

4.0 SUMMARY

4.0.1 The Former Camp Croft was located five miles southeast of Spartanburg, South Carolina. The OOU 3 encompasses approximately 24 acres, and is comprised of the Wedgewood Subdivision and the adjacent golf course. A map depicting the Camp Croft Munitions Response Area (MRA) and the respective munitions response sites (MRSs) is included as Figure B-4 in Appendix B.

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 59 grids within approximately 7.5 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. A project cost summary is in Appendix K. Tables 4-1 and 4-2 summarize project activity in the first and second phases, respectively. Table 4-3 details site-specific exposure data, as reported in monthly progress reports.

TABLE 4-1 PROJECT ACTIVITY: PHASE I

AREA (POLYGON)	NUMBER OF DGM AUTO PICKED TARGETS	NUMBER OF DGM SOLO CHI2 TARGETS	NUMBER OF DGM DIGS	NUMBER OF ANALOG DIGS	NUMBER OF UXO ITEMS	AMOUNT OF MUNITIONS DEBRIS (LBS)	AMOUNT OF CULTURAL DEBRIS (LBS)
17	902	24	156	39	22	27	244
40	554	126	236	74	0	4	53
40P	777	7	116	23	0	1	9
GC2	3336	75	547	17	2	28	136
35P1	491	9	172	12	0	1	18
35P3	326	24	114	8		1	29
35P4	436	18	77	32		5	13
Total	**6,822**	**283**	**1418**	**205**	**24**	**67**	**502**

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**	NUMBER OF ANALOG DIGS	NUMBER OF UXO ITEMS	AMOUNT OF MUNITIONS DEBRIS (LBS)	AMOUNT OF CULTURAL DEBRIS (LBS)
40P	NA	NA	4	0	0	0	2.0
GC2	NA	NA	26	0	0	0	5.75
35P1	NA	NA	93	0	0	0	26.45
35P3	NA	NA	102	0	0	1.0	28.5
35P4	NA	NA	49	0	1	6.75	9.5
Total	-	-	**274**	**0**	**1**	**7.75**	**72.20**

* See Table 4-1 for total anomalies.
** Additional Anomalies Polygons 17 and 40 were not investigated because of construction activity.

4.0.3 The scope required the investigation of four pits, seven anomalies for the purpose of quality control, and investigation of approximately 1785 anomalies. ZAPATAENGINEERING identified 7,105 anomalies by either Conventional/SUM or CHI discrimination methods (Table 4-1). These anomalies were prioritized as described in Section 2.0 to meet the scoped objectives. The objectives of the scope were met. The results are shown in Tables 4-1 and 4-2. An additional 1,258 anomalies should be considered for investigation based on the results of the POA analysis used in the 2006 investigation.

TABLE 4-3 EXPOSURE DATA

	TOTAL CUMULATIVE
HOURS WORKED	4163
NUMBER EMPLOYEES ON-SITE	18
ACCIDENTS/ILLNESS	0
LOST WORK HOURS DUE TO ACCIDENTS/ILLNESS	0
NUMBER OF VEHICLES	6
MILES DRIVEN	3885

5.0 RECOMMENDATIONS

5.1 LESSONS LEARNED

5.1.1 Because of the challenges inherent with inconsistent project funding, the former Camp Croft project team should regularly meet to discuss scope, schedule and other alternatives for risk reduction and strategies for removal actions.

5.1.2 Geophysical mapping and analysis should be completed three months prior to any anticipated removal effort to allow for processing, target identification, and evaluation of alternative processing methodologies to account for site specific influences, such as highly magnetic soils. This would result in field efficiencies for reacquisition and excavation scheduled to minimize impact to local residents and the golf course.

5.1.3 The local geologic conditions present unique challenges for DGM. Many adjustments to the technical approach were required within a short window of time and limited site access, in order to meet scope objectives. This climate of rapid response resulted in occasional omissions on dig sheets and inconsistencies in data management. Agreement on technical aspects of execution between the Contractor and Client should be clearly defined in writing (within the SOW) to minimize inadvertent omissions of data documentation or misunderstanding of acceptance criteria. Data management systems should be established prior to fieldwork and all decisions regarding adjustments to the approach should be in place prior to initiation of fieldwork. The Project Team, including USAESCH, its contractors, and all other key personnel must document these agreements regarding adjustments to the approach in writing.

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

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), 29P (0.810 acres), 30P (1.188 acres), 31P (1.105 acres), 32P (0.741 acres), 33P (0.760 acres), 35P2 (0.330 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 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.

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 Attn: Mr. Ronald Nesbit 69A Hagood Avenue Charleston, SC 29403-5107	4	1

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.

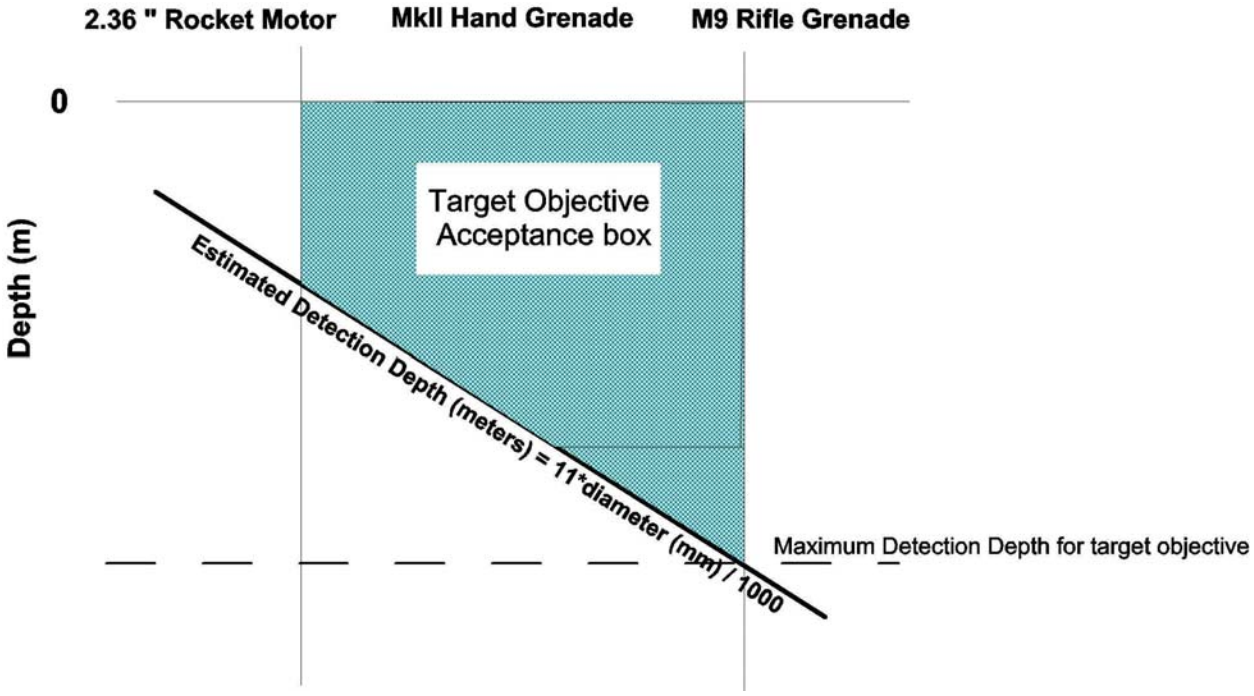
4.1 OE Detection.

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

T

Terrain:
☐Level ☐Moderate Slope ☐Rolling ☐Ruts ☐Gullies ☐Rocky ☐Swampy ☐ Dangerous

Tree Cover: Tree Height: _____
☐None ☐Light ☐Medium ☐ Thick

Brush:
☐None ☐Light ☐Medium ☐

Weather:
☐Sunny ☐Cloudy ☐Drizzle ☐Rain ☐Thunderstorms ☐Hail ☐Fog ☐Humid ☐Snow

Grid Corner Coordinates: Start End

File Name **U**TM/State Plane Local **Battery Voltage:**
____ ____ _____ *SW* _____, _____ _____, _____

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.

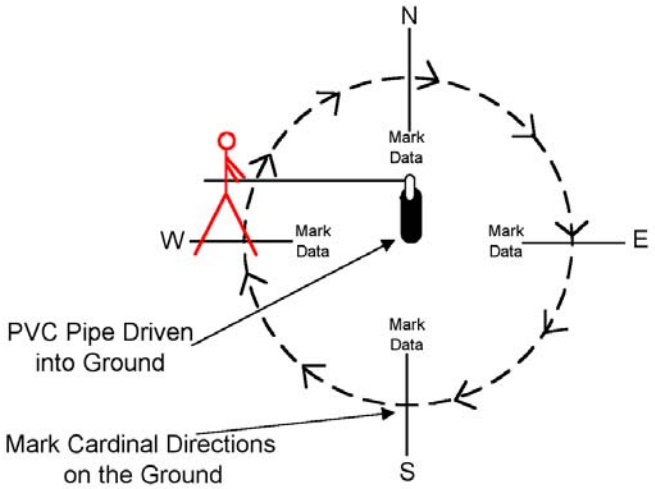
Acceptance Criteria: Static Background Test: EM61 +/- 2.5 mV, Mag +/- 1nT Static Spike Test: EM61 and Mag +/- 20% of standard item response, after background correction.

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

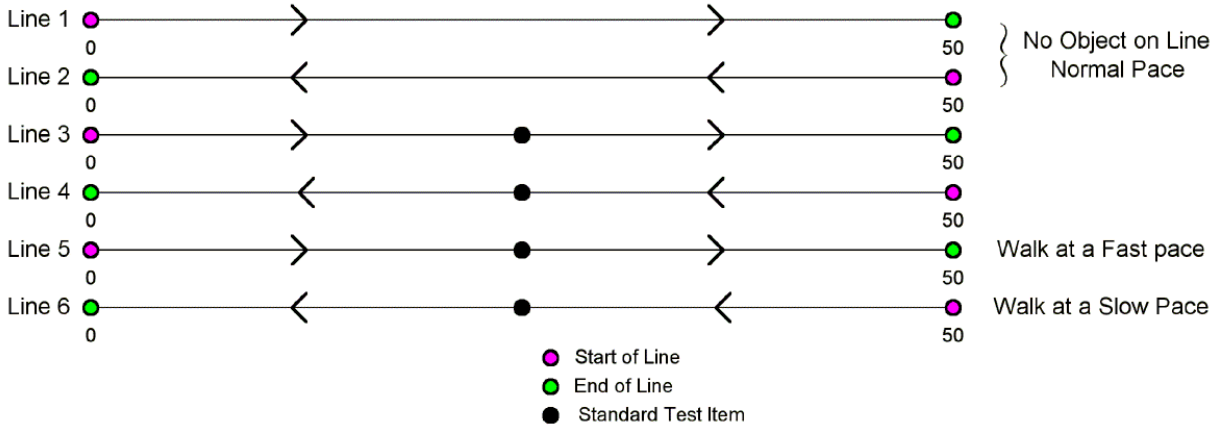
Purpose: Document latency, heading effects, repeatability of response amplitude, and positional accuracy.

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



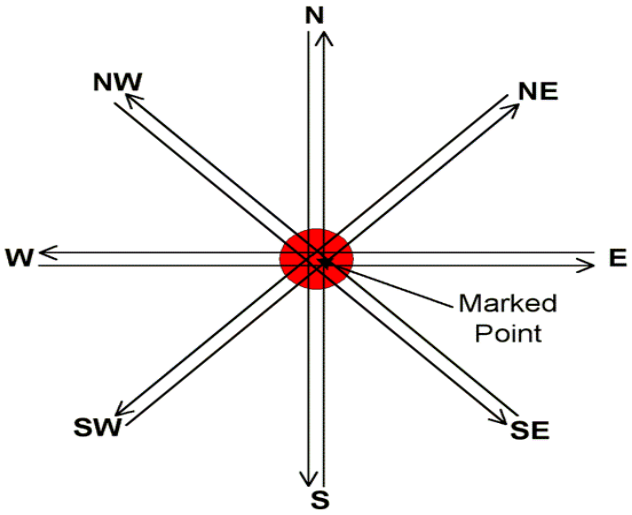
1.9 Octant Test (Heading Error Test for Magnetometer systems)

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.

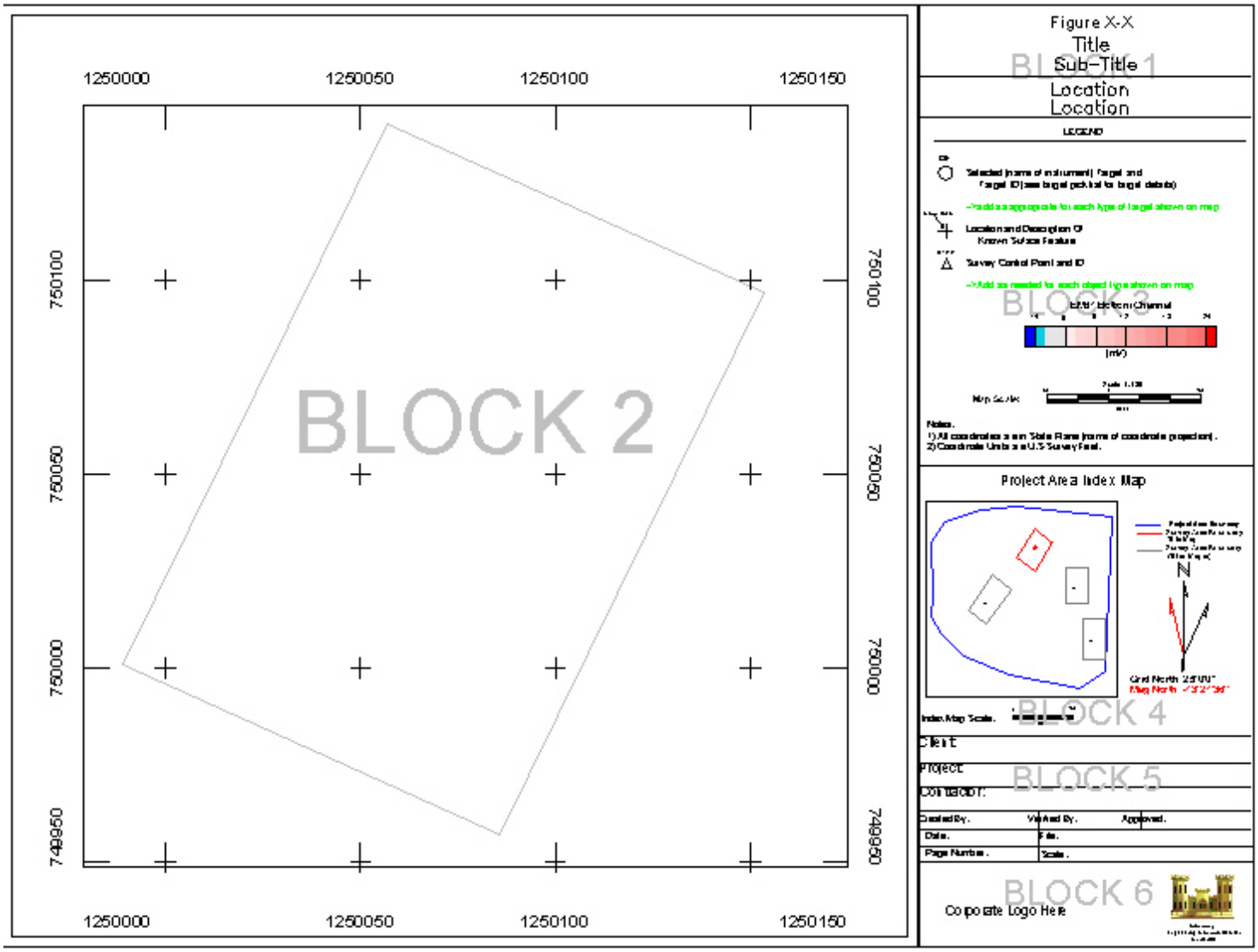
(3) Georeferenced aerial photographs of the site can be presented or superimposed with geophysical data when positioned with GPS or surveyed corners. Broad scale surface features can sometimes be matched with geophysical anomalies, combining two highly informative visual representations of the site.

(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

Site Areas

N

100 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

ZAPATA ENGINEERING

6302 Fairview Road, Suite 600 704.358.8240 Phone
Charlotte, North Carolina 28210 704.358.8342 Fax
ZAPATA@ZAPENG.COM WWW.ZAPENG.COM

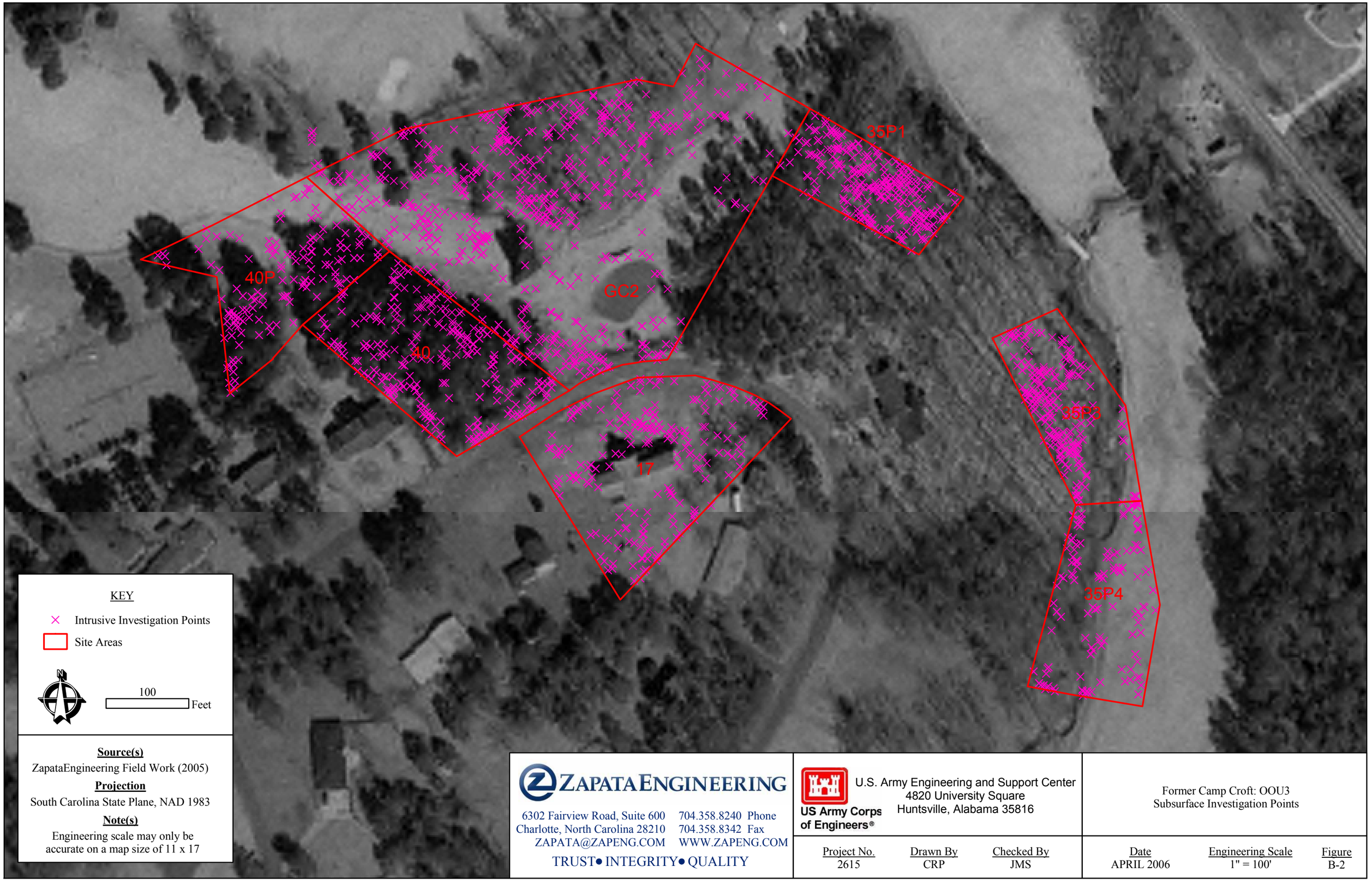
TRUST● INTEGRITY● QUALITY

US Army Corps of Engineers®

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

Former Camp Croft: OOU3
Areas of Investigation

Project No.	Drawn By	Checked By	Date	Engineering Scale	Figure
2615	CRP	DSW	APRIL 2006	1" = 100'	B-1



KEY

× Intrusive Investigation Points

Site Areas

N

100 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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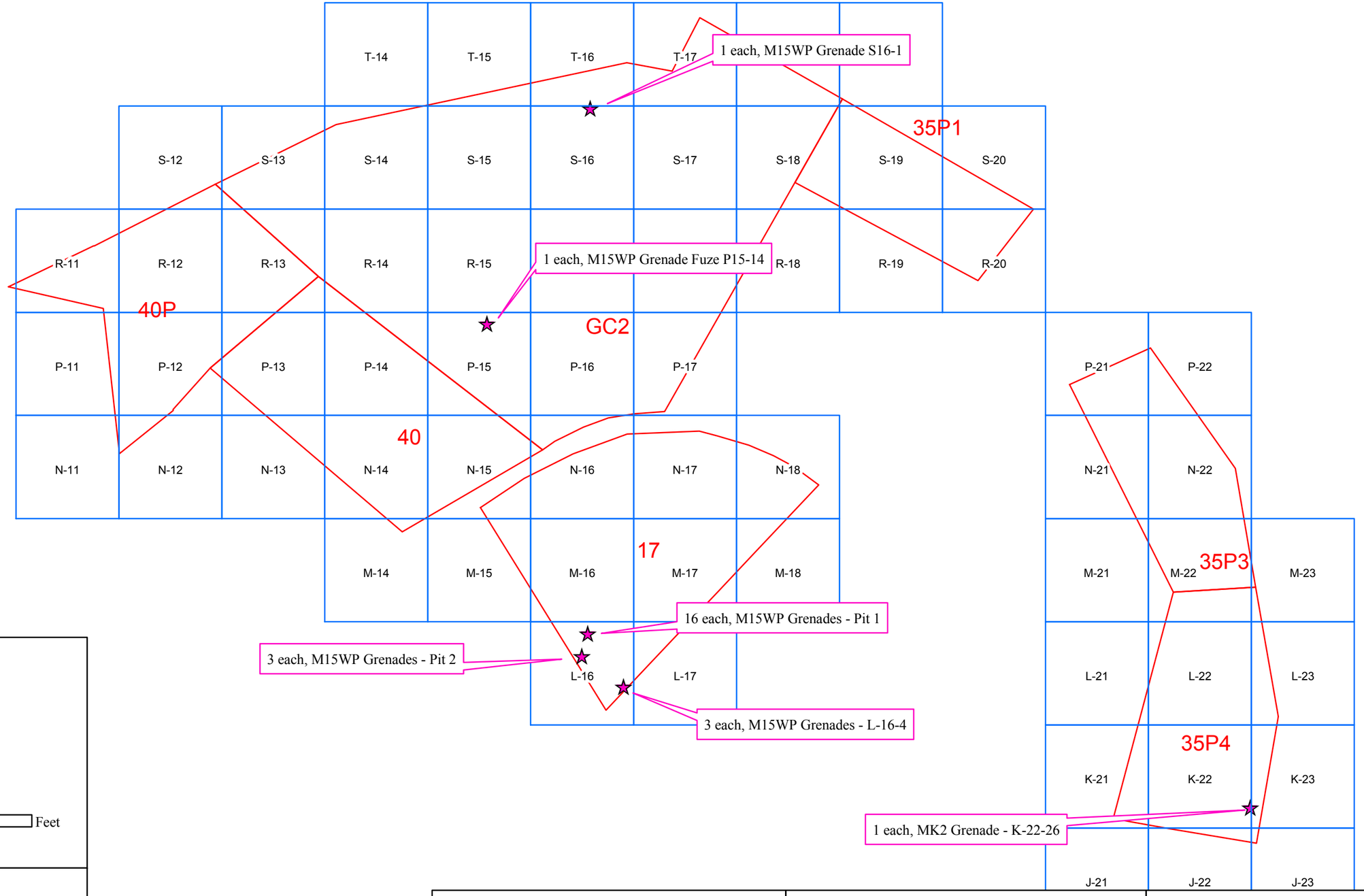
Former Camp Croft: OOU3
Subsurface Investigation Points

Project No.	Drawn By	Checked By	Date	Engineering Scale	Figure
2615	CRP	JMS	APRIL 2006	1" = 100'	B-2



KEY

- UXO Items
- Grid Area
- Site Areas

100 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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Huntsville, Alabama 35816

Former Camp Croft: OOU3
UXO Locations

Project No.	Drawn By	Checked By	Date	Engineering Scale	Figure
2615	CRP	JMS	APRIL 2006	1" = 100'	B-3

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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Huntsville, Alabama 35816

Former Camp Croft: OOU3
Overall Site Map

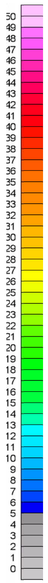
Project No.	Drawn By	Checked By	Date	Engineering Scale	Figure
2615	CRP	DSW	APRIL 2006	1" = 4800'	B-4

KEY

Grids

Subgrids

Electromagnetic Response (milliVolts)



mV

N

50

Feet

Source(s)

NAEVA Geophysics

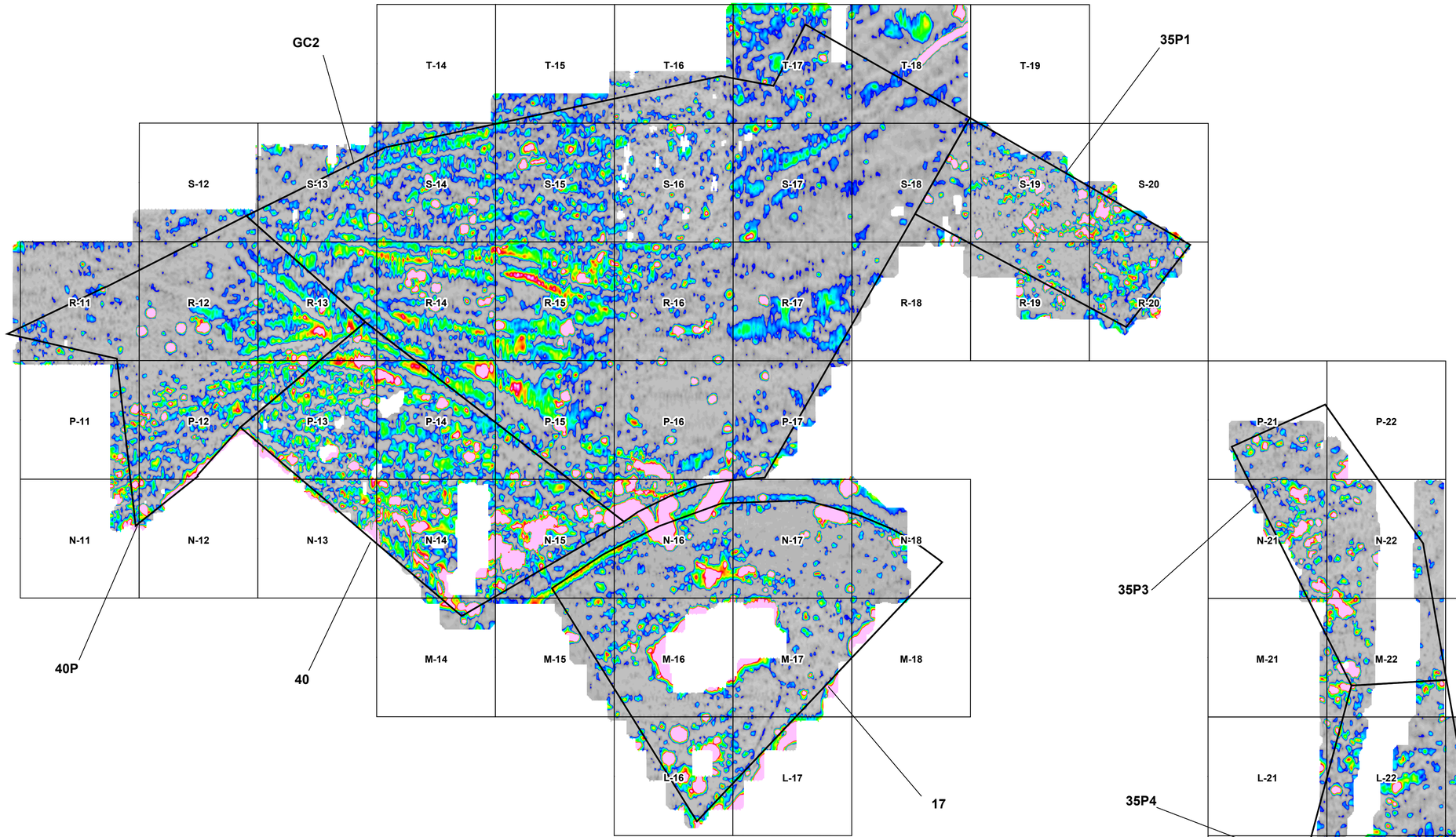
Projection

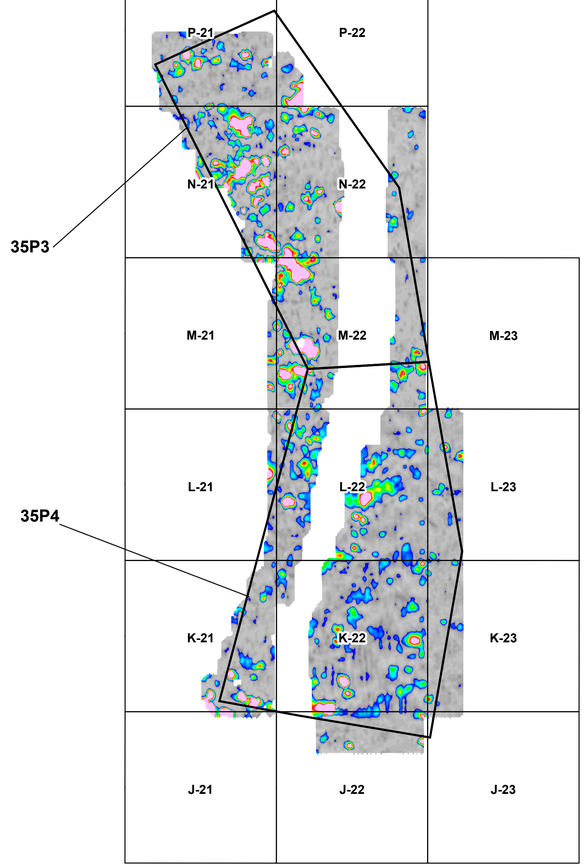
NAD83, Zone 17N

Note(s)

Digital geophysical image is from EM61 Mk2 data, the sum of Channels 1, 2 and 3.
Scale in mV is above.

Engineering scale may only be accurate on a map size of 22 x 34.





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Camp Croft, South Carolina
Site Mosaic

Project No.	Drawn By	Checked By	Date	Engineering Scale	Figure
2615	DRA	JMS	APRIL 2006	1" = 50'	B-5

APPENDIX C
SURVEY

GPO LOCATION/SEED ITEMS

BPB Point#	UTM COORDINATES		ELEVATIONS		DESCRIPTION
	NORTHING	EASTERN	ITEM	GROUND	
1	3,861,976.5100	421,451.9800		226.6071	Nail
2	3,862,022.7418	421,543.0242		227.3646	Nail
7	3,862,196.9687	425,571.8989		259.9215	USGS EC 2394
8	3,864,519.2468	422,339.7672		238.3608	USGS KOHLER
9	3,862,174.7779	425,556.4680		260.0787	USGS TINSLEY
13	3,862,004.2186	421,296.7632		224.8809	CP - REBAR
14	3,862,010.5406	421,292.8594	224.1590	224.5204	A
16	3,862,012.0957	421,296.5508	223.9587	224.5376	B
18	3,862,014.4414	421,298.5590	224.2014	224.4749	C
20	3,862,013.4508	421,293.9808	223.9226	224.4855	D
22	3,862,014.7668	421,291.2108	224.0687	224.4449	E
24	3,862,011.8540	421,290.1873	224.1649	224.4670	F
26	3,862,014.0293	421,285.6615	223.9275	224.4075	G
28	3,862,023.4092	421,287.1344	223.9416	224.2245	H
30	3,862,024.4912	421,284.9154	223.9104	224.2073	I
32	3,862,022.2986	421,282.4621	223.6319	224.2746	J
34	3,862,016.3548	421,273.8865	223.9943	224.3609	K
36	3,862,018.3215	421,270.2518	224.0492	224.3304	L
38	3,862,019.7475	421,267.4792	223.9206	224.2337	M
40	3,862,025.1577	421,269.7758	223.6044	224.1591	N
42	3,862,028.5113	421,269.9692	223.3447	224.0457	O
44	3,862,026.4697	421,280.9040	223.8801	224.1924	P
46	3,862,036.6394	421,289.1602	222.6095	223.0190	Q
48	3,862,040.0025	421,293.9331	222.1090	222.4809	R
50	3,862,041.4820	421,290.7936	221.8157	222.2945	S
52	3,862,044.5280	421,290.3359	221.3624	221.8928	T
54	3,862,043.6057	421,287.3836	221.6320	222.0740	U
56	3,862,044.0608	421,284.5767	221.6753	222.1443	V
58	3,862,041.2888	421,283.6473	222.1961	222.6078	W
64	3,862,016.5213	421,278.7975		224.4375	REBAR
65	3,862,020.0813	421,264.0778		224.2356	GRID
66	3,862,029.6436	421,274.3555		224.1361	NAIL
67	3,862,030.6882	421,272.3905		224.1398	ROCK
68	3,862,017.4265	421,269.8380		224.3647	ROPE
69	3,862,013.0330	421,278.8418		224.4470	ROPE
70	3,862,008.6167	421,287.7578		224.4928	ROPE
74	3,862,055.0136	421,272.4001		221.3427	CP REBAR
76	3,862,049.0253	421,277.0479	221.5595	221.8977	X
78	3,862,045.0609	421,280.8223	221.7486	222.1700	Y
80	3,862,048.8086	421,281.4519	221.3446	221.7424	Z
82	3,862,053.1579	421,276.1866		221.5129	GRID
83	3,862,050.3148	421,282.0603		221.6319	FLAG
84	3,862,046.0047	421,291.0831		221.7634	FLAG
85	3,862,041.6592	421,300.0999		222.0299	FLAG
86	3,862,037.2733	421,309.0904		222.2810	GRID

Horizontal Coordinates:
NAD 83 UTM, Zone 0017, Meters
Vertical Coordinates:
NAVD 88,Meters

SURVEY POINTS/OOU3

BPB Point#	Northing	Eastern	Elevations		Description
1	1120148	1741809	700	0	
2	1120316	1741590	700	0	
3	1120316	1741590	700	0	
4	1120226	1741485	700	0	
5	1120068	1741677	700	0	
6	1120148	1741809	700	0	
7	1120226	1741485	700	0	
8	1120068	1741677	700	0	
9	1120283	1741382	700	0	
10	1120185	1741449	700	0	
11	1120144	1741397	700	0	
12	1120305	1741289	700	0	
13	1120345	1741372	700	0	
14	1120225	1741486	700	0	
15	1120186	1741449	700	0	
16	1120285	1741381	700	0	
17	1120305	1741290	700	0	
18	1120305	1741289	700	0	
19	1120345	1741373	700	0	
20	1120405	1741490	700	0	
21	1120315	1741590	700	0	
22	1120226	1741485	700	0	
23	1120346	1741372	700	0	
24	1120345	1741373	700	0	
25	1120178	1741872	700	0	
26	1120170	1741850	700	0	
27	1120155	1741820	700	0	
28	1120147	1741808	700	0	
29	1120315	1741590	700	0	
30	1120405	1741490	700	0	
31	1120418	1741516	700	0	
32	1120184	1741927	700	0	
33	1120182	1741898	700	0	
34	1120178	1741872	700	0	
35	1120418	1741516	700	0	
36	1120463	1741608	700	0	
37	1120523	1741889	700	0	
38	1120515	1741934	700	0	
39	1120418	1741516	700	0	
40	1120515	1741934	700	0	
41	1120566	1741961	700	0	
42	1120488	1742099	700	0	
43	1120406	1742054	700	0	
44	1120184	1741927	700	0	
45	1120488	1742099	700	0	
46	1120381	1742285	700	0	
47	1120311	1742231	700	0	
48	1120406	1742054	700	0	
49	1120488	1742099	700	0	

SURVEY POINTS/OOU3

BPB Point#	Northing	Eastern	Elevations		Description
50	1120381	1742285	700	0	
51	1120246	1742399	700	0	
52	1120211	1742320	700	0	
53	1120311	1742231	700	0	
54	1120381	1742285	700	0	
55	1120132	1742480	700	0	
56	1120014	1742501	700	0	
57	1120010	1742421	700	0	
58	1120211	1742320	700	0	
59	1120246	1742399	700	0	
60	1120132	1742480	700	0	
61	1119788	1742363	700	0	
62	1119780	1742415	700	0	
63	1119766	1742500	700	0	
64	1120009	1742421	700	0	
65	1120014	1742501	700	0	
66	1119766	1742500	700	0	
67	1119787	1742365	700	0	
68	1120091	1741748	700	0	
69	1120120	1741790	700	0	
70	1119895	1741870	700	0	
71	1120091	1741748	700	0	
72	1120113	1742076	700	0	
73	1120083	1742048	700	0	
74	1119938	1741910	700	0	
75	1119895	1741870	700	0	
76	1119974	1741945	700	0	
77	1119938	1741910	700	0	
78	1120010	1741979	700	0	
79	1119974	1741945	700	0	
80	1120047	1742013	700	0	
81	1120010	1741979	700	0	
82	1120083	1742048	700	0	
83	1120047	1742013	700	0	
84	1120120	1741790	700	0	
85	1120144	1741838	700	0	
86	1120144	1741838	700	0	
87	1120163	1741890	700	0	
88	1120163	1741890	700	0	
89	1120165	1741960	700	0	
90	1120165	1741960	700	0	
91	1120162	1741973	700	0	
92	1120161	1741977	700	0	
93	1120158	1741990	700	0	
94	1120156	1741996	700	0	
95	1120152	1742009	700	0	
96	1120147	1742020	700	0	
97	1120142	1742033	700	0	
98	1120135	1742045	700	0	

SURVEY POINTS/OOU3

BPB Point#	Northing	Eastern	Elevations		Description
99	1120132	1742050	700	0	
100	1120125	1742061	700	0	
101	1120116	1742072	700	0	
102	1120113	1742076	700	0	
454	1120183	1741400	700	P-12	
455	1120283	1741400	700	R-12	
495	1120283	1741500	700	R-13	
496	1120383	1741500	700	S-13	
534	1120183	1741600	700	P-14	
535	1120283	1741600	700	R-14	
536	1120383	1741600	700	S-14	
573	1120083	1741700	700	N-15	
574	1120183	1741700	700	P-15	
575	1120283	1741700	700	R-15	
576	1120383	1741700	700	S-15	
577	1120483	1741700	700	T-15	
613	1120083	1741800	700	N-16	
614	1120183	1741800	700	P-16	
615	1120283	1741800	700	R-16	
616	1120383	1741800	700	S-16	
617	1120483	1741800	700	T-16	
652	1119983	1741900	700	M-17	
653	1120083	1741900	700	N-17	
654	1120183	1741900	700	P-17	
655	1120283	1741900	700	R-17	
656	1120383	1741900	700	S-17	
657	1120483	1741900	700	T-17	
693	1120083	1742000	700	N-18	
696	1120383	1742000	700	S-18	
697	1120483	1742000	700	T-18	
736	1120383	1742100	700	S-19	
737	1120483	1742100	700	T-19	
776	1120383	1742200	700	S-20	
850	1119783	1742400	700	K-22	
851	1119883	1742400	700	L-22	
853	1120083	1742400	700	N-22	
854	1120183	1742400	700	P-22	
890	1119783	1742500	700	K-23	
891	1119883	1742500	700	L-23	
892	1119983	1742500	700	M-23	
900	1120182	1741898	706.3995	xgps-3	
901	1119997	1741572	714.7283	xgps-4	
902	1120299	1742446	646.4439	xgps-5	
903	1120114	1742493	642.6537	xgps-6	
904	1116589	1755715	852.759	usgs ec 2394	
905	1116589	1755715	852.759	usgs kohler4	
906	1116516	1755664	853.2749	usgs tinsley2	
907	1119997	1741572	714.6662	sa901	
908	1120163	1741890	706.4108	sa87	

SURVEY POINTS/OOU3

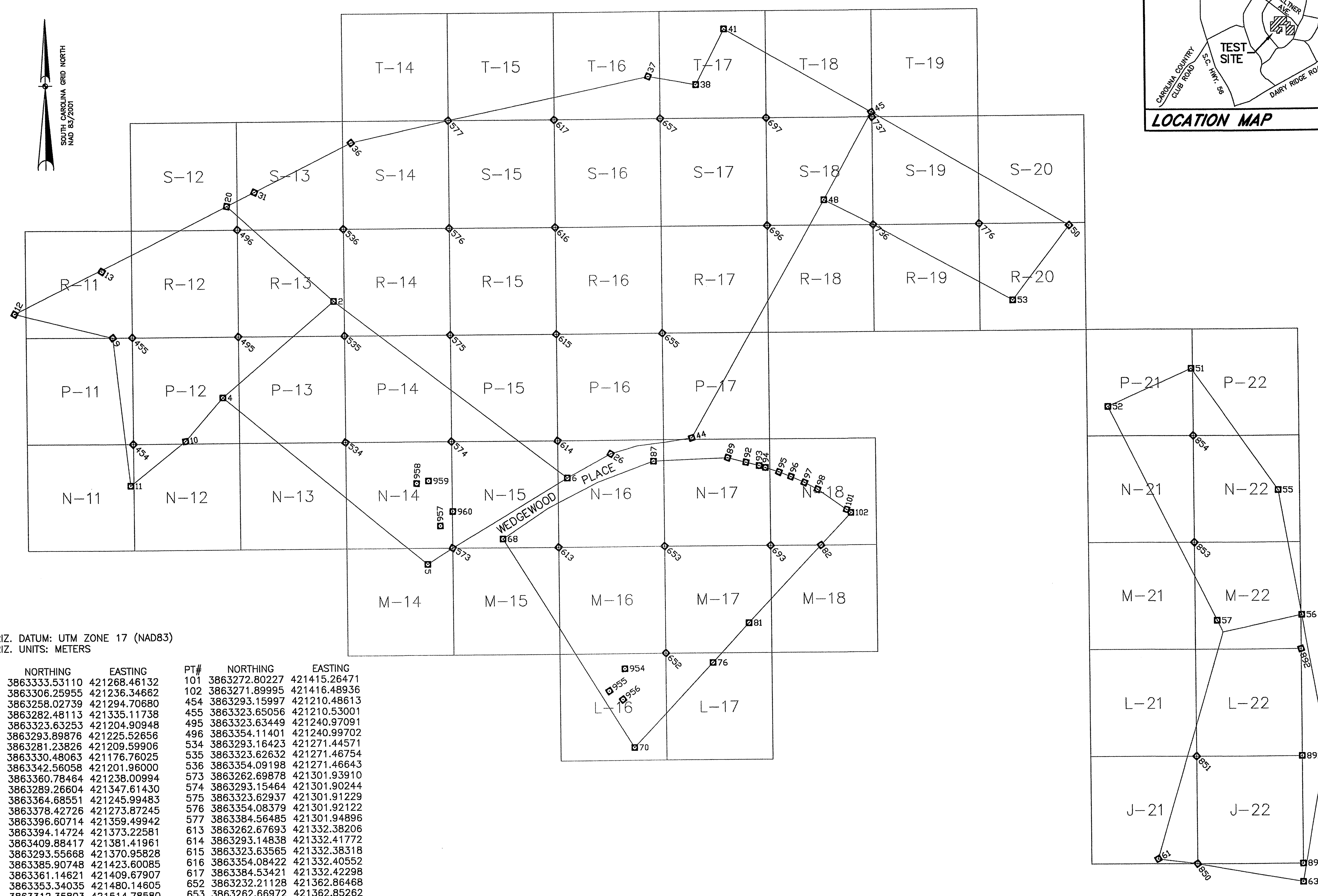
BPB Point#	Northing	Eastern	Elevations		Description
909	1120165	1741960	706.4	sa89	
910	1120135	1742045	706.0092	sa98	
911	1120142	1742033	706.2821	sa97	
912	1120147	1742020	706.3159	sa96	
913	1120152	1742009	706.5718	sa95	
914	1120156	1741996	706.8885	sa94	
915	1120158	1741990	706.8822	sa93	
916	1120161	1741978	706.7863	sa92	
917	1120116	1742072	707.9466	sa101	
918	1120113	1742076	705.0461	sa102	
919	1120083	1742048	714.0407	sa82	
920	1120010	1741979	720.3016	sa81	
921	1120091	1741748	709.1444	sa68	
922	1120083	1741800	712.6617	sa613	
923	1120083	1741900	718.3822	sa653	
924	1120083	1742000	714.9458	sa693	
925	1120406	1742054	685.3999	sa48	
926	1120488	1742099	685.934	sa45	
927	1120483	1742100	685.7186	sa737	
928	1120383	1742100	679.5249	sa736	
929	1120311	1742231	681.2394	sa53	
930	1120279	1742224	683.8364	x	
931	1120020	1741968	719.7682	x	
932	1120182	1741898	707.6525	sa900	
933	1120383	1742200	675.2915	sa776	
934	1120381	1742285	665.9523	sa50	
935	1120246	1742399	656.1507	sa51	
936	1120183	1742400	658.906	sa854	
937	1120211	1742320	678.1717	sa52	
938	1120185	1742361	666.5382	x	
939	1120279	1742224	685.9111	sa930	
940	1120083	1742400	654.8454	sa853	
941	1120010	1742421	644.3796	sa57	
942	1119883	1742400	645.3749	sa851	
943	1119788	1742363	647.5624	sa61	
944	1119915	1742456	643.1238	x	
945	1120185	1742361	666.5905	sa938	
946	1119783	1742400	642.2438	sa850	
947	1119766	1742500	643.6118	sa63	
948	1119783	1742500	643.3122	sa890	
949	1119883	1742500	643.3601	sa891	
950	1119983	1742500	643.9059	sa892	
951	1120014	1742501	644.5672	sa56	
952	1120132	1742480	646.1809	sa55	
953	1120114	1742493	646.2201	903	
954	1119969	1741861	0	pit 1	Grid 17
955	1119948	1741846	0	pit 2	Grid 17
956	1119940	1741859	0	pit 3	Grid 17
957	1120104	1741689	0	pit 1	Grid 40

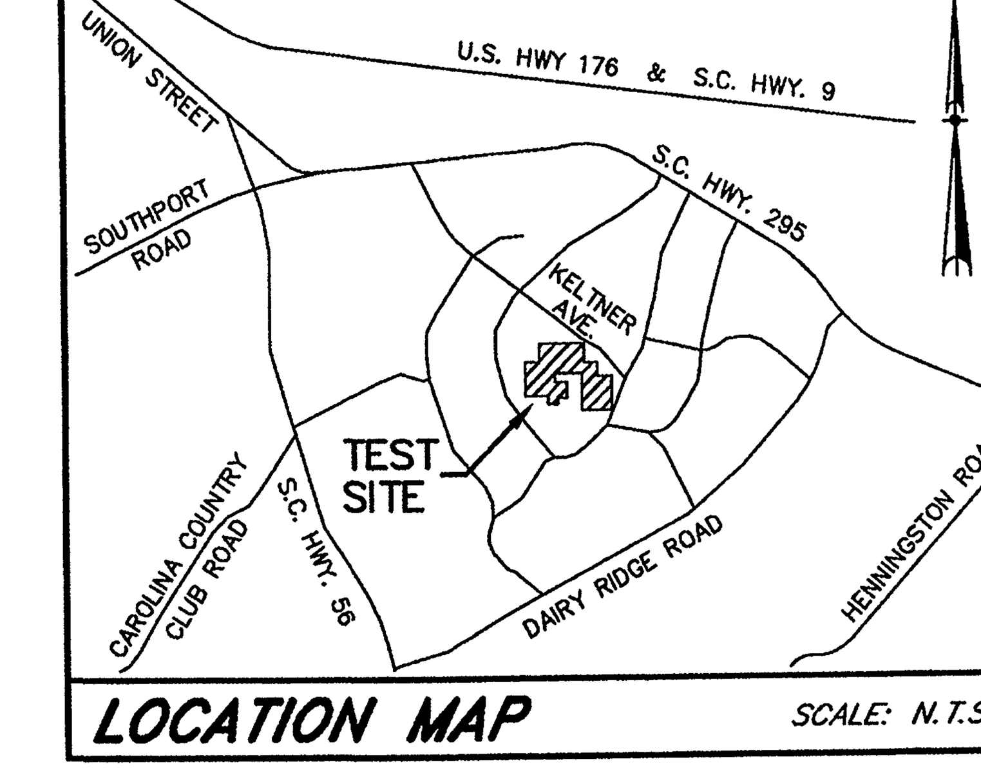
SURVEY POINTS/OOU3

BPB Point#	Northing	Eastern	Elevations		Description
958	1120144	1741667	0	pit 2	Grid 40
959	1120146	1741678	0	pit 3	Grid 40
960	1120118	1741701	0	pit 4	Grid 40
961	1120182	1741898	706.3236	PT900	
962	1119969	1741861	727.6767	PT954	
963	1119948	1741846	729.3815	PT955	
964	1119940	1741859	729.0132	PT956	
965	1119895	1741870	727.4129	PT70	
966	1119983	1741900	725.2618	PT652	
967	1119974	1741944	722.5679	PT76	
968	1119997	1741572	714.7082	PT901	
969	1120068	1741676	711.602	PT5	
970	1120083	1741700	710.5898	PT573	
971	1120183	1741600	712.2179	PT534	
972	1120183	1741700	705.1805	sa574	
973	1120148	1741809	706.742	PT6	
974	1120183	1741800	704.6625	PT614	
975	1120283	1741800	695.0735	PT615	
976	1120383	1741800	693.2625	sa616	
977	1120483	1741800	690.6002	sa617	
978	1120483	1741900	682.6577	PT657	
979	1120523	1741889	685.6271	PT37	
980	1120515	1741934	684.9611	PT38	
981	1120566	1741961	682.3814	PT41	
982	1120483	1742000	686.6215	PT697	
983	1120383	1742000	690.7172	PT696	
984	1120184	1741927	706.5452	PT44	
985	1120170	1741850	705.9499	PT26	
986	1120283	1741900	699.8051	PT655	
987	1120104	1741689	708.0937	PT957	
988	1120144	1741667	710.1305	PT958	
989	1120146	1741678	708.3698	PT959	
990	1120117	1741701	705.4487	sa960	
991	1120310	1741578	708.3595	x	
992	1120182	1741898	706.506	sa900	
993	1120283	1741700	702.2668	sa575	
994	1120383	1741700	701.6502	sa576	
995	1120483	1741700	698.849	sa577	
996	1120463	1741608	702.3888	sa36	
997	1120383	1741600	706.1472	sa536	
998	1120316	1741590	707.7771	sa2	
999	1120283	1741600	707.4291	sa535	
1000	1120283	1741500	712.9744	sa495	
1001	1120226	1741485	714.5394	sa4	
1002	1120185	1741449	717.2094	sa10	
1003	1120144	1741397	719.1673	sa11	
1004	1120183	1741400	719.5514	sa454	
1005	1120283	1741400	718.1853	sa455	
1006	1120283	1741382	718.6311	sa9	

SURVEY POINTS/OOU3

BPB Point#	Northing	Eastern	Elevations		Description
1007	1120305	1741289	717.9264	sa12	
1008	1120345	1741372	716.2588	sa13	
1009	1120383	1741500	709.9498	sa496	
1010	1120405	1741490	709.7022	sa20	
1011	1120418	1741516	708.324	sa31	





LOCATION MAP SCALE: N.T.S.

HORIZ. DATUM: S.C. STATE PLANE (NAD83)
HORIZ. UNITS: INTERNATIONAL FEET

PT#	NORTHING	EASTING
2	1120315.50103	1741590.23420
4	1120225.96759	1741484.85808
5	1120067.72157	1741676.43841
6	1120148.01427	1741809.04405
9	1120282.95778	1741381.66624
10	1120185.39000	1741449.35766
11	1120143.82424	1741397.09492
12	1120305.40828	1741289.27461
13	1120345.07690	1741371.96932
20	1120404.92004	1741490.26886
26	1120170.29333	1741850.05287
31	1120417.72973	1741516.47177
36	1120462.85473	1741607.95379
37	1120522.59669	1741888.96495
38	1120514.53544	1741934.01707
41	1120566.19120	1741960.89517
44	1120184.39579	1741926.66388
45	1120487.53707	1742099.35497
48	1120406.25842	1742053.68562
50	1120380.70180	1742284.96477
51	1120246.22858	1742398.68838
52	1120210.61832	1742319.90047
53	1120311.44847	1742231.14917
55	1120131.92741	1742479.94253
56	1120014.35447	1742500.81642
57	1120009.54858	1742420.79422
61	1119787.60885	1742362.88293
63	1119765.62948	1742500.08436
68	1120091.34107	1741747.71389
70	1119894.96224	1741869.75268
76	1119973.94819	1741944.45701
81	1120010.39803	1741978.84612
82	1120083.03012	1742047.58026
87	1120162.84684	1741890.40600
89	1120165.48639	1741960.34159
92	1120161.09446	1741977.54669
93	1120157.82233	1741989.95764
94	1120156.13912	1741995.80182
95	1120151.86297	1742008.57550
96	1120147.42920	1742019.83975
97	1120141.82841	1742032.52100
98	1120135.44329	1742044.83296
101	1120116.31905	1742072.09561
102	1120113.35872	1742076.11570
454	1120182.95199	1741399.99573
455	1120283.02192	1741400.11277
495	1120282.99611	1741500.01961
496	1120383.02972	1741500.07834
534	1120183.01987	1741600.06463
535	1120282.99626	1741600.10935
536	1120382.98436	1741600.07877
573	1120083.05943	1741700.17064
574	1120183.01531	1741700.02342
575	1120283.03318	1741700.02881
576	1120382.98441	1741700.03121
577	1120483.02309	1741700.09530
613	1120083.01460	1741800.08424
614	1120183.02173	1741800.17437
615	1120283.08072	1741800.03408
616	1120383.01276	1741800.08050
617	1120482.94947	1741800.11089
652	1119983.05346	1741900.15488
653	1120083.01784	1741900.08842
655	1120282.94315	1741900.08951
657	1120482.99644	1741900.08989
693	1120083.09788	1742000.01565
696	1120382.97810	1742000.07547
697	1120483.00113	1742000.08220
736	1120383.09373	1742100.15643
737	1120482.95756	1742100.04755
776	1120383.06348	1742200.04441
850	1119783.00950	1742400.08704
851	1119882.96675	1742400.09786
853	1120083.00167	1742400.09722
854	1120183.06799	1742399.99513
890	1119783.04393	1742500.08261
891	1119883.05530	1742500.04115
892	1119982.94400	1742500.04127
954	1119968.79755	1741861.29332
955	1119948.25631	1741846.39534
956	1119940.25629	1741859.23796
957	1120103.97529	1741688.78158
958	1120143.88004	1741666.75132
959	1120146.25569	1741677.99739
960	1120117.49043	1741700.58693

HORIZ. DATUM: UTM ZONE 17 (NAD83)
HORIZ. UNITS: METERS

PT#	NORTHING	EASTING
2	3863333.53110	421268.46132
4	3863306.25955	421236.34662
5	3863258.02739	421294.70680
6	3863282.48113	421335.11738
9	3863323.63253	421204.90948
10	3863293.89876	421225.52656
11	3863281.23826	421209.59906
12	3863330.48063	421176.76025
13	3863342.56058	421201.96000
20	3863360.78464	421238.00994
26	3863289.26604	421347.61430
31	3863364.68551	421245.99483
36	3863378.42726	421273.87245
37	3863396.60714	421359.49942
38	3863394.14724	421373.22581
41	3863409.88417	421381.41961
44	3863293.55668	421370.95828
45	3863385.90748	421423.60085
48	3863361.14621	421409.67907
50	3863353.34035	421480.14605
51	3863312.35803	421514.78580
52	3863301.51429	421490.77678
53	3863332.24377	421463.74316
55	3863277.52465	421539.53400
56	3863241.69932	421545.88451
57	3863240.24154	421521.50193
61	3863172.62283	421503.83863
63	3863165.91466	421545.64113
68	3863265.21824	421316.42587
70	3863205.37300	421353.59413
76	3863229.43334	421376.36248
81	3863240.53653	421386.84358
82	3863262.66138	421407.79233
87	3863286.99384	421359.90900
89	3863287.79236	421381.21809
92	3863286.45276	421386.46000
93	3863285.45475	421390.24126
94	3863284.94141	421392.02180
95	3863283.63745	421395.91350
96	3863282.28559	421399.34527
97	3863280.57803	421403.20870
98	3863278.63152	421406.95954

PT#	NORTHING	EASTING
101	3863272.80227	421415.26471
102	3863271.89995	421416.48936
454	3863293.15997	421210.48613
455	3863323.65056	421210.53001
495	3863323.63449	421240.97091
496	3863354.11401	421240.99702
534	3863293.16423	421271.44571
535	3863323.62632	421271.46754
536	3863354.09198	421271.46643
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574	3863293.15464	421301.90244
575	3863323.62937	421301.91229
576	3863354.08379	421301.92122
577	3863384.56485	421301.94896
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616	3863354.08422	421332.40552
617	3863384.53421	421332.42298
652	3863232.21128	421362.86468
653	3863262.66972	421362.85262
655	3863323.58553	421362.86934
657	3863384.54032	421362.88586
693	3863262.68592	421393.29974
696	3863354.05726	421393.34254
697	3863384.53355	421393.35279
736	3863354.08429	421423.83649
737	3863384.51208	421423.81150
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853	3863262.62386	421515.20171
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891	3863201.69347	421545.63756
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955	3863221.61324	421346.48168
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957	3863269.07263	421298.47065
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959	3863281.95605	421295.18825
960	3863273.18963	421302.06876

50 0 50 100
GRAPHIC SCALE
1" = 50'

SURVEYOR'S SIGNATURE — 4032 REG. NO. — 8/03/05 DATE

B. P. BARBER & ASSOCIATES, INC.

REVISIONS			
NO.	DESCRIPTION	DATE	BY	APP.

APPROVALS
PROJECT ENG. TMA
DESIGNED BY: JOK
DRAWN BY: ACK
CHECKED BY: JOK
APPROVED BY: TMA

SEAL
SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION — B.P. BARBER & ASSOCIATES, INC. No. C00020
DATE

bpb
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Engineers • Planners • Surveyors

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(864)-949-1111

SHEET TITLE
GRID POINT STAKEOUT TO SUPPORT O/E REMOVAL AT OOU3 - CAMP CROFT

DATE: NOV. 11, 2004 SCALE: 1" = 50'

PROJECT
SURVEY FOR:
ZAPATA ENGINEERING
NEAR SPARTANBURG SPARTANBURG COUNTY, S.C.

DISK
N.B. NO. 80
REF. FIGURE C-1
PROJECT NO. 04640

SHEET 1 OF 1

FILE NO. 04640-02

APPENDIX D
GEOPHYSICAL INVESTIGATION DATA

APPENDIX D1
FINAL GEOPHYSICAL PROVE-OUT LETTER REPORT

FINAL GEOPHYSICAL PROVE-OUT LETTER REPORT

ORDNANCE AND EXPLOSIVE REMOVAL ACTION

FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA

DECEMBER 2004

Contract: DACA87-00-D-0034
Task Order: 0014

Prepared for:

US Army Engineering and Support Center, Huntsville

by:

NAEVA GEOPHYSICS INC.
A SUBSIDIARY OF NORTH AMERICAN EXPLORATION OF VIRGINIA INC.

and

ZAPATA ENGINEERING
TRUST • INTEGRITY • QUALITY

1100 Kenilworth Avenue
Charlotte, NC 28204

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LIST OF TABLES

APPENDICES

1.0 INTRODUCTION

1.0.1 This report covers the procedures and results of an electromagnetic (EM) and magnetics (MAG) geophysical prove-out (GPO) conducted in two phases at the former Camp Croft, Spartanburg, South Carolina from October 18 to October 23, and from November 18 to December 4, 2004. NAEVA Geophysics Inc. (NAEVA) and ZAPATAENGINEERING, P.A. performed the work as detailed in the Geophysical Prove-out Work Plan.

1.0.2 The GPO was designed to demonstrate the ability of proposed geophysical sensors, positioning methodologies, sensor deployment, data flow and data processing procedures to meet the objectives of the geophysical survey.

1.0.3 Two geophysical techniques were tested at the GPO. Time domain EM data were collected with the Geonics EM61 MK2 and MAG data were collected with Geometrics G858 Cesium Vapor Magnetometers. EM data were collected over the GPO grid before and after burial of inert seed items; MAG data were collected after seeding.

1.0.4 NAEVA personnel conducted quality control checks before and after all data collection sessions.

2.0 SITE DESCRIPTION

The test plot is located approximately eight miles southeast of Spartanburg, South Carolina. The GPO test plot at Camp Croft was established in an approximate 35 meter (m) by 35 m area (Appendix B, Figure 1a). The GPO grid is comprised of a flat and mostly clear portion, the southern half, and a northern half consisting of thick brush and trees; the combination is typical of the area to be surveyed with digital geophysical mapping (DGM). After using a Schonstedt for a thorough sweep of the area and finding an abundance of surface and near-surface metallic items, most of which were too embedded to be removed, plus unknown-source anomalies, ZAPATAENGINEERING directed NAEVA to use the entire grid area for background and seeded surveys in order to have sufficient room to avoid these items and anomalies. Geophysical data were collected along approximately east-west parallel lines spaced 0.5 meter apart.

3.0 GEOPHYSICAL EQUIPMENT

3.1 ELECTROMAGNETIC SYSTEM

3.1.1 The Geonics EM61 MK2 system

The EM61 MK2 is a time-domain electromagnetic instrument designed to detect, with high spatial resolution, near-surface ferrous and non-ferrous metallic objects. The applicability of the instrument for ordnance detection has been widely demonstrated at sites across the United States and overseas. The instrument consists of two air-cored coils (1 m by 0.5 m), batteries, processing electronics and a digital data recorder. The larger of the two coils functions as the EM transmitter, and receiver and is oriented horizontally 40 cm above ground surface; a second receiver is positioned 40 cm above the lower coil. Secondary currents induced in both coils are measured in millivolts (mV). The EM61 MK2 system records multiple time-gates, recording the response in the receiver coils at times after the EM pulse is generated. Earlier time gates are able to detect smaller metallic sources, but may also demonstrate increased noise and a corresponding tendency to generate "false positive" targets. The instrument was operated in wheel mode with a bottom coil height of 40 cm.

3.2 MAGNETOMETER SYSTEM

3.2.1 Magnetic Base Station

In the first-phase GPO (GPO A) on October 23 a magnetic base station consisting of a single G856 proton precession magnetometer was set up approximately 91 m (100 yards) from the GPO test grid. The base magnetometer did not work. Half the GPO was collected with the G-858 followed by a recollection of the first survey line. Next, the other half of the GPO was collected followed by an additional recollection of the first survey line to observe the general diurnal drift over the course of the GPO., A comparison of the repeated lines revealed negligible drift (Figure 2).

3.2.2 Geometrics G-858 Cesium Vapor Magnetometer

3.2.2.1 The Geometrics G858 is a self-oscillating split beam cesium vapor digital magnetometer with a dynamic range of 17,000 to 100,000 nanoTeslas (nT). The instrument consists of a sensor mounted on an aluminum staff, console electronics, and batteries. During GPO A he system was operated with a single sensor height of approximately 65 centimeters (cm). Data were collected at a rate of 10 Hertz (Hz). The static test for these data shows that instrument performance was not acceptable; these data are included for completeness only and not for any conclusive analysis for the GPO. In GPO B, data were collected over portions of the GPO grid in vertical gradient mode at bottom sensor heights of 6, 8 and 12 inches with a line spacing 0.25 meters. Selected profiles from the additional surveys and the original survey were compared and treated as a modified Height Optimization Test. The results are further addressed in Section 4.3.2.

3.2.2.2 EM data were collected along parallel transects with 0.5 meter line spacings MAG data were collected along parallel transects with 0.25 meter line spacings. To control line spacing, non-metallic tape measures were used in conjunction with PVC pin flags as navigational aids for the instrument operator.

4.0 QUALITY CONTROL TESTS

To ensure high-quality geophysical data, NAEVA's Project Geophysicist evaluated instrument setup and monitored data collection and processing in accordance with the Geophysical Prove-out Work Plan.

4.1 STATIC/STANDARD TESTS

4.1.1 Prior to (AM) and following (PM) geophysical data collection each day, EM and MAG sensor data were recorded in a stationary mode for a minimum of five minutes. The purpose of this test is to aid in identifying equipment problems, determine instrument drift and instrument response. A metal standard (2-inch trailer ball) was placed in exactly the same position relative to the EM coils and MAG sensors during the static test. Instrument readings of the standard were reviewed to make sure measurements repeated within +/- 20%.

4.1.2 Figure 3a, Static Test AM, shows results of the post-seed data for the AM static/standard test for the MAG system recorded prior to collection of the GPO grid data. The upper graph displays data over a five-minute time interval. The first minute (or 600 readings) were collected without the metal standard followed by other minute of data collection with the metal standard, followed by three minute without the metal standard. The lower graph is a display of the same data but with a smaller range vertical scale centralized on the lower MAG responses to show static measurements. The AM readings exceed acceptance criteria for the test. Figures 3c through 3f are vertical gradient tests. These test exhibit excessive noise. Because subsequent relative performance of the magnetic and electromagnetic methods followed that of prior experience in the Camp Croft area, indicating the advantage of using EM in this environment, these figures are included only for completeness.

4.1.3 Figures 4a, 4b, 4c, 4d, 4e, and 4f show results of the static/standard test for the four time gates of the lower coil of the EM system recorded prior to and following collection of the GPO grid data for the unseeded and seeded surveys. All tests are displayed with and without a centralized vertical scale.

4.1.4 The first 1800 readings of each profile represent the background static test. The standard test occurs at readings from approximately 1800 to 2400 and show the effects of a trailer ball placed under the coils. The remaining readings, from approximately 2400 to 3000 is the static test after removal of the trailer ball. Readings from approximately 1800 to 2400 confirm that the EM system is detecting the standard trailer ball and shows that the largest signal response is from the earliest time gate (Channel 1). Readings from approximately 2400 to 3000 indicate that the EM system response returns to background levels once the standard trailer ball is removed. The AM static tests for the unseeded survey (Figure 4a) show no apparent instrument drift and a noise level of approximately +/-1.0 mV for the first time window of the lower coil. The remaining data channels from the AM test show lower noise levels than the first data channel (first time window of lower coil). The PM static test (Figure 4b) shows slight instrument drift and a noise level of +/- 0.5 mV in the first channel. The AM static test for the seeded survey (Figure 4c) shows a 4 mV instrument drift in Channel 1 over the duration of one minute before decreasing to 0.75 mV. There is a +/-1.5 mV noise level in the first channel for the seeded

survey. The PM static test for the seeded survey (Figure 4d) shows a 1.5 mV instrument drift in the third minute of data collection in Channel 1. However, this instrument drift approaches and remains approximately 0 mV for the remainder of data collection after the metal standard is removed.

4.2 AZIMUTHAL TEST

Figure 5 shows the results of the Azimuthal test for the MAG sensor system. The purpose of this test is to document any data dropouts caused by sensor orientation and to optimize the avoidance of magnetometer sensor "dead zones". The data are shown in a profile that represents the sensor rotating a full 360° from the north to the east, south, west and back to the north position. There were no "dead zones" identified in the Azimuthal test for the magnetic sensors. This test verifies that sensors oriented vertically, with survey lines oriented ESE and WNW as the lines are oriented, would be an appropriate configuration of the MAG system for this site. There is approximately 1 nT heading difference in these two traverse directions.

4.3 SENSOR HEIGHT OPTIMIZATION TEST

4.3.1 Figure 6 shows the results of the Height Optimization Test performed with the MAG system for GPO A. These heights are not relevant to this WP and are not discussed further.

4.3.2 Figure 22 shows the results of the modified Height Optimization Test compiled from data that were collected November 19 and 23, 2004 during GPO B with the MAG system. Data were collected over portions of the GPO grid at heights of 6, 8 and 12 inches with a line spacing of 0.25 meters and a 30 cm vertical gradient sensor separation. In addition to select profiles from the November 19 and 23, 2004 surveys, Figure 22 presents the original 25 inch sensor height survey. The 25 inch survey was not considered for this evaluation. The seven meter profile was selected for comparison because three Mk II Grenades, the smallest items of concern, are buried at or near their detection threshold; these items are identified as B, D, and E on Figure 22. Analytic signal profiles of the three sensor heights are presented with both the total field (of the bottom sensor) and vertical gradient. Of the three sensor heights, the vertical gradient 8 inch sensor height appears to possibly, but not reliably, detect Items B, D, and E, followed by the 6 inch sensor height, and lastly the 12 inch sensor height, which does not appear to detect any of the items. As a result, the vertical gradient, 8 inch MAG sensor height was chosen for selecting targets.

4.3.3 No Height Optimization Test was performed with the EM system because the EM61 MK2 wheel assembly is manufactured with a fixed height of 40 cm from the bottom coil to the ground surface.

4.4 SIX LINE TEST

4.4.1 After GPO data collection, a Six-Line Test was performed with each instrument. The purpose of the Six-Line Test was to document latency, heading effects, and positional accuracy. The Six-Line Test consists of one 10-meter line. Each instrument collects data over this line six times. The first two passes are performed at normal walking speed with no metallic items placed on the line. The next two passes are conducted at walking speed with a metal object placed at the 5-meter mark. The fifth pass is performed while walking at a slow pace with a metal object

still placed at the 5-meter mark. This test is used to simulate data collection uphill where the instrument operator will be walking slower than normal. The final pass is performed while walking at a fast pace with a metal object still placed at the 5-meter mark. This is used to simulate data collection downhill where the instrument operator will be walking faster than normal.

4.4.2 The Six-Line Test for the MAG system is shown on Figure 7. Data were collected for this test using the local grid coordinates and interpolation along the survey lines. The graph shows lines 1 and 2 of the test with no standard (no seeded item). Lines 3 and 4 show the two lines collected over the trailer ball at normal speed. The final two test lines (5 and 6) over the trailer ball, first at a fast pace (Line 5), then at a slow pace (Line 6). Test results show that the MAG response over the trailer ball is repeatable to within about +/- 20%.

4.4.3 Figure 8 shows the Six-Line Test for the EM system. Data for this test were collected in the same manner as described for the MAG. The primary purpose of the Six-Line Test was to determine the latency effects that need to be corrected during data processing. Test results show the EM response over the trailer ball is repeatable to within +/- 20%.

4.5 OCTANT TEST

Prior to GPO data collection, an Octant Test was performed with the MAG system to determine heading effects. This test was accomplished by collecting a total of eight lines N-S, S-N, NE-SW, SW-NE, E-W, W-E, SE-NW, and NW-SE over a ferrous metal object. Figure 9 shows the test results and was used to determine the appropriate heading corrections to be applied during data processing.

4.6 REPEAT LINE TEST

4.6.1 After Pre and Post-Seed data were collected, a repeat line of data was recorded to document positional and geophysical data repeatability. This test was performed in all surveys for the EM systems. One repeat line was collected on the post-seed survey for the MAG due to equipment problems. Line 34.5 of the post-seeded GPO Grid was used for the Repeat Line Test. Figure 10 shows the Repeat Line Test data for the MAG. Data were collected for this test using the local grid coordinates and interpolation along the survey lines. The upper graph shows the original data for Line 34.5. The lower graph shows the repeated line for visual comparison of line 34.5. The positional and geophysical data repeatability are excellent for the MAG system.

4.6.2 Figure 11a shows the Repeat Line Test for the unseeded EM data. Data for this test were collected 10 feet outside of the grid path and parallel to the direction of travel as written in Appendix C of the Geophysical Work Plan. The upper graph shows the original line, which is an extension of Line 5, acquired after the pre-seeded GPO Grid was surveyed. The bottom graph shows the extension of Line 5 repeated. The lines do not show repeatability, perhaps due to the slightly different line path of travel over this very responsive ground. Figure 11b shows the original and repeat line 5 on grid (with the approval of U.S Army Engineering and Support Center-Huntsville (USAESCH) and ZAPATAENGINEERING on-site representatives) following the collection of the seeded survey. Comparison of the two repeat lines shows that the positional and geophysical data are generally repeatable. Figures 24a and 24b show original and repeat

profiles of Line 6.5 for the moderate and fast passed surveys, respectively, which show acceptable repeatability.

4.6.3 Comparison of the two lines in Figure 11a is not ideal. Geology in this area is very responsive; hot rocks are found within the grid, and bedrock outcrops just outside the grid. Considering these observations, a variation of only six inches or so along line path could easily produce the difference in response seen in the lines. Future results in such environments might be improved by either (or both) stretching a rope along the line for more accurate repetition, or repeating the line with carefully observed variations in path to determine the average response range for the area.

4.7 VIBRATION TEST (CABLE SHAKE)

Prior to GPO data collection, a vibration test was preformed to identify and replace shorting cables and broken pin-outs. With the instrument held in a static position and collecting data, all the cables were shaken. Figures 12, 13 and 23 are the results from the EM vibration tests. None of the tests exhibit extreme data spikes attributable to equipment failure. Figures 14, 25a and 25b show the results from the MAG vibration tests, which also do not display extreme data spikes.

5.0 TEST PLOT

5.1 GPO DATA (PRE-SEEDED SURVEY)

5.1.1 A background survey was performed with the EM61 MK2 during the afternoon of October 18, 2004. A preliminary contour map was generated using Geosoft's Oasis Montaj program to guide the placement of seed items in unresponsive areas of the GPO plot. Further processing of these data are seen in Figures 15a, 15b and 15c, which represent the background survey in Channels 1, 2 and the sum of Channels 1, 2 and 3. A background survey of the GPO plot was not performed with the Geometrics G-858 due to equipment problems. After consulting with USAESCH and ZAPATAENGINEERING site representatives, it was determined that the EM61 MK2 was sufficient for the background survey, provided magnetics data were collected over the seeded GPO.

5.1.2 After conducting the EM61 MK2 survey for the background response, additional tests were conducted by placing all selected seed items on the surface oriented perpendicular to the line of travel to measure their respective responses with the same source-to-sensor distance (Figure 16a). This data was used to generate profiles of the items measured along the survey lines (Figures 16b through 16k). At the suggestion of USAESCH's on-site representative, open-hole tests of select items, still oriented perpendicular to the line of travel, at various depths, but at the same instrument height as before were used to determine the depths at which these items should be buried (Table 5-1).

5.2 GPO DATA (POST-SEEDED SURVEY)

GPO Test Grid data were collected with both the MAG and EM systems after ZAPATAENGINEERING personnel buried the seed items. The locations and depth of burial for the seed items are listed in Table 5-1.

5.2.1 Magnetometer System

Figure 17 shows the color contour map of the 8-inch height seeded MAG data with identified anomalies targeted. A total of 48 targets were selected. Four out of 20 seed items were successfully detected by NAEVA (20% detection). Target ID numbers for detected seed items are 3, 15, 38, and 36, which respectively correspond to anomalies C, I, S, and W on Figure 1. Table 5-1 lists each seed item, it associated response and its pick status. Most of the seeded items that were not detected are due to the presence of large amplitude anomalies nearby which effectively mask the smaller seed items. Previous experience, at this site, suggests this occurrence is due to the magnetic soils and rocks commonly found at Camp Croft (see Appendix A for Target lists).

5.2.2 Electromagnetic System

5.2.2.1 Figure 18a shows a color contour map of Channel 1 EM data collected over the GPO. A total of 83 anomalies were targeted. In channel one, NAEVA was able to successfully detect 20 out of the 26 seed items (77% detection). NAEVA's ID# for detected seed items numbers are 4, 20, 24, 25, 26, 28, 30, 34, 36, 37, 42, 44, 45, 50, 59, 74, 76, 79, 82 and 83, which respectively correspond to anomalies C, F, S, X, M, W, T, L, U, A, K, O, G, E, Z, D, I, P, Q, and Y on Figure 1. Table 5-1 lists each seed item, it associated response and its pick status. The lowest response

detected from a seed item in Channel 1 is 3.10 mV for target #83, item Y. A list of target picks including anomaly ID#, location and peak value is located in Appendix A.

5.2.2.2 Figure 18b shows a color contour map of Channel 2 EM data in the GPO. A total of 70 anomalies were selected. From channel 2, NAEVA was able to successfully detect 13 out of the 26 seed items (50 % detection). NAEVA's ID# for detected seed items numbers are 4, 20, 25, 26, 28, 30, 34, 36, 37, 42, 44, 45, and 59, which respectively correspond to anomalies C, F, X, M, W, T, L, U, A, K, O, G, and Z on Figure 1. Table 5-1 lists each seed item, it associated response and its pick status. The lowest detected response from a seed item in Channel 2 is 3.87 mV for target #59, item Z.

5.2.2.3 Figure 18c shows a color contour map for the sum of channels 1, 2 and 3 collected over the GPO. A total of 89 anomalies were selected. By summing Channels 1, 2, and 3, NAEVA was able to successfully detect 21 out of the 26 seed items (81% detection). NAEVA's ID# for detected seed items numbers are 4, 20, 24, 25, 26, 28, 30, 34, 36, 37, 42, 44, 45, 50, 59, 74, 76, 79, 82, 83, and 85, which respectively correspond to anomalies C, F, S, X, M, W, T, L, U, A, K, O, G, E, Z, D, I, P, Q, Y, and R on Figure 1. Table 5-1 lists each seed item, it associated response and its pick status. The lowest detected response from a seed item is 4.43 mV for target #79, item P.

5.2.3 Undetected Seed Items

Some of the seed items were not detected at shallower depths than similarly constructed, more deeply buried seed items that were detected. The following sub-sections address these occurrences on a case-by-case basis, utilizing Table 5-1, specifically surface item responses and examination of raw.

5.2.3.1 In EM61 Channel 1 and the Sum Channel, 2.36" Rocket Motor Thin Walled Simulants were detected at PLS depths of 11.69 (Item I) and 12.29 (Item P) inches below ground surface (BGS), but not detected at 11.13 inches (Item H) BGS. As shown in Table 5-1, responses from all three are close to background. Examination of the raw profiles over these items shows that indeed local background obscures item response. The profile over items H, I and P shows that I and P are clearly above local background while H is adjacent to an elevated, responsive section of background that masks the response from item H.

5.2.3.2 Item O was detected six to thirteen inches deeper than the similarly constructed non-detected Item R. Examination of the raw profiles over these items shows that local background obscures item response, similar to items H, I and P. The profile over item shows O clearly above local background while R is adjacent to an elevated, responsive section of background that masks the response from item R.

5.2.3.3 Item N was detected an inch deeper than the similarly constructed non-detected Item T for Channels 1, 2, and the Sum of 1, 2 and 3. As seen in Table 5-1, the difference in surface response between the two items is about 15 mV in for Channel 1. Accounting for this difference an anticipated response from Item N might be 5 mV. Examination of the raw profile over Item

N shows that it is adjacent to an elevated, responsive section of background that masks the response from item N. The combination of these occurrences amply explains non-detection.

5.2.4 Open-Hole Test

An optimum seed depth, open-hole survey was conducted for all non-simulant seed items, with the exception of Item G. The items were initially placed near a depth of 11 times their diameter and the EM61 Mk2 was slowly maneuvered over each item. The local background before the item and the mV response from the item was recorded with the instrument static. Each item's depth was adjusted until what was thought to be an adequate mV response was achieved. Table 5-1 shows the open-hole depth and background adjusted peak response. As seen in the table all responses from the item of greatest interest (the Mk II Grenade) from Channel 3 and 4 were less than 1 mV, Channel 2 were less than 2 mV and Channel 1 were less than 3.5 mV .

TABLE 5-1 SEED-ITEM DETAILS

Item Number	Item Letter	Inert Item	NAD 83 UTM, Zone 0017, Meters			Nominal Location[2, 3]			EM61 Surface Peak Response (Including Background), mV				EM61 Static Open-Hole Peak Response (Above Local Background), mV				EM61 Response Channel						Magnetometer Response	
																	Channel 1		Channel 2		Sum 1,2,3			
			Northing (meters)	Easting (meters)	PLS Depth to Top (inches)	X (meter)	Y (meter)	Z[1] (inches)	Channel 1	Channel 2	Channel 3	Channel 4	Channel 1	Channel 2	Channel 3	Channel 4	Response mV	Detected	Response mV	Detected	Response mV	Detected	Response nT	Detected
501	A	2.36" ROCKET MOTOR	3862010.54	421292.86	14.22	6.00	4.00	14.30	220	155	104	60	8.2	4.8	2.5	0.9	14.04	Y	9.02	Y	27.84	Y	ND	N
404	B	Mk II GRENADE	3862012.10	421296.55	22.79	3.00	7.00	23.50	90	52	18	4	3.0	1.3	0.8	0.5	ND	N	ND	N	ND	N	ND	N
413	C	M 9 RIFLE GR THK SIM	3862014.44	421298.56	10.76	2.00	10.00	11.50	860	610	376	194	-	-	-	-	74.54	Y	47.50	Y	146.45	Y	95.7	Y
499	D	NON-ZE# NAEVA MK II	3862013.45	421293.98	22.16	6.00	7.00	22.60	90	47	15	2	2.7	1.8	0.9	0.2	5.64	Y	ND	N	7.99	Y	ND	N
402	E	Mk II GRENADE	3862014.77	421291.21	14.81	9.00	7.00	15.30	108	64	28	7	2.2	1.1	0.4	0.9	12.69	Y	ND	N	17.74	Y	ND	N
502***	F	2.36" ROCKET MOTOR	3862011.85	421290.19	11.89	9.00	4.00	12.50	252	182	115	64	10.6	5.8	2.8	0.0	20.97	Y	14.67	Y	44.14	Y	ND	N
513	G	M 9 RIFLE GRENADE**	3862014.03	421285.66	18.89	14.00	4.00	23.00	598	378	200	92	-	-	-	-	16.13	Y	7.21	Y	30.71	Y	ND	N
408	H	2.36" RM THN SIM	3862023.41	421287.13	11.13	16.00	13.00	11.50	57	14	0	0	-	-	-	-	ND	N	ND	N	ND	N	ND	N
409***	I	2.36" RM THN SIM	3862024.49	421284.92	11.69	19.00	13.00	12.30	54	13	1	0	-	-	-	-	4.09	Y	ND	N	5.10	Y	34.7	Y
512	J	M 9 RIFLE GR THN SIM	3862022.30	421282.46	25.30	20.00	10.00	23.30	125	36	4	2	-	-	-	-	ND	N	ND	N	ND	N	ND	N
507	K	2.36" RM THK SIM	3862016.35	421273.89	14.43	26.00	1.00	15.10	328	227	131	33	-	-	-	-	12.42	Y	8.49	Y	32.39	Y	ND	N
505***	L	2.36" RM THK SIM	3862018.32	421270.25	11.07	30.00	1.00	12.40	263	181	93	45	-	-	-	-	20.23	Y	9.60	Y	44.71	Y	ND	N
506	M	2.36" RM THK SIM	3862019.75	421267.48	12.32	33.00	1.00	12.30	279	187	104	51	-	-	-	-	15.92	Y	12.23	Y	30.60	Y	ND	N
509	N	M 9 RIFLE GR THN SIM	3862025.16	421269.78	21.83	33.00	7.00	22.00	114	28	2	0	-	-	-	-	ND	N	ND	N	ND	N	ND	N
410	O	M 9 RIFLE GR THK SIM	3862028.51	421269.97	27.59	34.00	10.00	28.50	681	464	272	134	-	-	-	-	11.39	Y	7.50	Y	21.78	Y	ND	N
411***	P	2.36" RM THN SIM	3862026.47	421280.90	12.29	23.00	13.00	13.00	38	10	1	0	-	-	-	-	3.57	Y	ND	N	4.43	Y	ND	N
405***	Q	Mk II GRENADE	3862036.64	421289.16	16.12	18.00	26.00	17.50	92	48	18	4	3.5	1.2	0.5	-0.2	3.23	Y	ND	N	5.74	Y	ND	N
414	R	M 9 RIFLE GR THK SIM	3862040.00	421293.93	14.64	15.00	31.00	22.30	746	499	285	138	-	-	-	-	ND	N	ND	N	5.67	Y	ND	N
406	S	Mk II GRENADE	3862041.48	421290.79	18.85	19.00	31.00	16.00	84	46	18	5	2.9	1.4	0.5	-0.3	16.01	Y	ND	N	34.97	Y	63.8	Y
510	T	M 9 RIFLE GR THN SIM	3862044.53	421290.34	20.88	20.00	33.50	23.00	130	35	4	1	-	-	-	-	20.99	Y	10.75	Y	35.86	Y	ND	N
407	U	M 9 RIFLE GR THK SIM	3862043.61	421287.38	17.40	23.00	31.50	19.50	833	574	330	165	-	-	-	-	15.33	Y	9.04	Y	29.08	Y	ND	N
511	V	M 9 RIFLE GR THN SIM	3862044.06	421284.58	18.46	26.00	30.50	20.00	124	40	4	1	-	-	-	-	ND	N	ND	N	ND	N	ND	N
412	W	M 9 RIFLE GR THK SIM	3862041.29	421283.65	16.20	26.00	27.50	18.30	739	527	315	160	-	-	-	-	17.00	Y	11.35	Y	40.37	Y	63.4	Y
500	X	2.36" ROCKET MOTOR*	3862049.03	421277.05	13.31	35.00	31.50	14.80	689	489	302	148	11.7	6.9	3.2	1.3	24.92	Y	12.41	Y	57.48	Y	ND	N
508	Y	M 9 RIFLE GR THN SIM	3862045.06	421280.82	16.59	29.00	29.50	19.50	137	38	1	0	2.3	0.3	-0.3	0.0	3.10	Y	ND	N	4.64	Y	ND	N
403	Z	Mk II GRENADE	3862048.81	421281.45	15.66	30.00	33.50	16.50	99	59	23	6	3.1	1.8	0.5	0.1	6.01	Y	3.87	Y	12.08	Y	ND	N

Notes:

1 The approximate depth measurement for each seed item is taken from the top of the seed item and is reported as depth below ground surface (BGS).

2 The approx. location for each seed item is measured from the SE corner of the grid to the center of horizontal seed items or the top of seed items. The (x, y) coordinates for the southeast corner of the grid are (0, 0).

3 The orientation of each seed item is measured with respect to the survey line direction. Seed items were placed perpendicular to the survey line direction.

* Rocket Motor includes crushed body ** Head is loose and is not from an M9 *** Blind QC item ND = Not Detected ⊥ Perpendicular

Surrogate Item Construction Record:

M 9 RIFLE GR THK SIM: Thick Walled Simulant Composed of (1) 6"L x 2.5"OD and (1) 6"L x 1"OD Galvanized Steel Nipple

M 9 RIFLE GR THN SIM: Thin Walled Simulant Composed of Rolled AC Galvanized Steel Ducting

2.36 RM THN SIM: Thin Walled Simulant Composed of (1) 6"L x 1.25"OD Galvanized Steel Nipple

2.36 RM THK SIM: Thick Walled Simulant Composed of Rolled AC Galvanized Steel Ducting

6.0 DATA PROCESSING

Positional data and geophysical sensor data were processed and interpreted using Geosoft's Oasis montaj® UX-Detect program. In addition, Geonics Dat61MK2 and Geometrics Magmap 2000 programs were used to download and combine the EM61 MK2 and G858 magnetic data with the position data. After preliminary editing, each day's data were transmitted that day, or the day following acquisition, to NAEVA's Charlottesville office for advanced processing. Data processing was accomplished using the following steps:

- A demedian filter was applied to the geophysical data to remove sensor drift and level the data to a zero baseline (a 75 point windowed median was used for the EM data). Additional refinement of the automated leveling was performed on Channels 1, 2 and 3 and a sum of these channels was calculated.
- The sensor data were gridded with a 0.2 meter grid cell size and 1 meter blanking distance and displayed on the screen in gridded and pixel format.
- Initially, EM anomalies were selected from the leveled and lag corrected Channel 2 gridded data utilizing a peak-picking algorithm utilizing a minimum threshold of 3 mV. This threshold was used for all Channels before refining the results of peak-picking algorithm. Anomalies were independently identified based on the Channel 2 data, then additional targets visible in Channel 1 and the Sum Channel were added.
- Additional anomalies were identified that were not selected using the peak-picker. Anomalies present in the unseeded background survey were removed.
- An output of the final data in *.gdb (Geosoft Database) format was generated. Positioning data were reported in meters using the NAD83 UTM Zone 17N coordinate system.
- Dig sheets were generated with location and peak response value and signal-to-noise ratio (SNR) based on the average calculated background response. Target lists are located in Appendix A.
- Color contour maps were produced of the gridded data with superimposed target locations.

6.1 DATA PROCESSING QC PROCEDURES

Background noise was estimated by digitizing polygons over two areas of each data set (i.e., unseeded EM and seeded MAG and EM) that appear to represent background response. For the EM61 MK2 data two areas were selected, each representing slightly different noise characteristics (Figure 19a). After evaluating the statistics for both the unseeded and seeded GPO (Table 6-1), it was determined that the difference in background response was negligible. To avoid influence from the blind seed items, the unseeded background response statistics were used to determine the targeting threshold.

TABLE 6-1 COMPARISON OF EM61 UNSEEDED & SEEDED AVERAGE NOISE RESPONSE

Unseeded Avg. Noise Response		Seeded Avg. Noise Response		Difference	
Channel	Noise Estimates	Channel	Noise Estimates	Channel	Noise Estimates
1	3.39	1	3.29	1	0.1
2	2.72	2	1.92	2	0.8
3	1.73	3	1.26	3	0.47
SUM	6.53	SUM	5.99	SUM	0.54

For the MAG data, two areas were selected; due to the broad extent of several of the anomalies (Figure 19b). The data were clipped such that measurements that are well above the background noise were not included in the statistical analysis. The digitized polygons are described below.

- EM Polygon 1 (file EM61_BRP_1.ply) represents a quiet area of the grid in the open area that contains no obstructions.

- EM Polygon 2 (file EM61_BRP_2.ply) represents a relatively quiet portion of the grid in the wooded area containing several obstructions (trees). The location of this polygon overlaps MAG Polygon 1.

- MAG Polygon 1 (file Mag_BRP_1.ply) represents a relatively quiet portion of the grid in the wooded area containing several obstructions (trees). No known seed items were buried within the polygon boundary. The location of this polygon overlaps EM Polygon 2.

- MAG Polygon 2 (file Mag_BRP_2.ply) represents a relatively quiet area of the grid that contains no obstructions. Several seed items were buried within the polygon boundary and elevated background response is visible corresponding with the area of elevated response in the EM61 data.

- For each of the polygons statistics were calculated using Geosoft's DoD QA/QC statistics function. The results for both unseeded and seeded EM and MAG surveys are summarized in Tables 6-2, 6-3, and 6-4. Noise estimates for each polygon are provided; the value for the noise estimate is three times the standard deviation (3SD). The overall average noise estimate was calculated by calculating the average noise from the two polygons.

- The SNR values stated in the EM61 target list were calculated by dividing the peak gridded mV response by the average noise estimate for each channel.

The yield curves provided illustrate the relationship between the target threshold and the number of selected targets (Figures 20a through 20d). The point at which the curve transitions from a relatively linear to a polynomial or exponential curve generally indicates the transition point between targeting above the noise level. For the EM61 Seeded survey the transition points appear to correspond with the noise estimates generated from the statistical analysis of the

background response. Yield curves can be used to estimate the number of targets that will be encountered at a selected threshold based on the minimum expected response of munitions of concern at a site.

TABLE 6-2 GPO EM SEEDED SURVEY BACKGROUND RESPONSE STATISTICS AND NOISE ESTIMATE*

GPO Seeded Survey												
Background Polygon 2												
Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*	
Channel 1	-0.87	6.66	1.52	1.33	1.09	1.46	0.76	1.60	234.00	17.00	4.38	
Channel 2	-0.56	4.59	0.91	0.83	0.03	0.91	0.49	1.25	234.00	17.00	2.73	
Channel 3	-0.77	1.90	0.41	0.40	0.26	0.54	0.27	0.69	234.00	17.00	1.62	
Sum Channel	-1.56	13.45	2.84	2.50	1.10	2.77	1.44	3.10	234.00	17.00	8.31	
Background Polygon 1												
Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*	
Channel 1	-1.76	4.02	0.47	0.41	0.11	0.73	0.37	0.89	619.00	12.00	2.19	
Channel 2	-0.94	1.61	0.22	0.17	-0.01	0.37	0.21	0.58	619.00	12.00	1.11	
Channel 3	-0.91	0.92	-0.06	-0.07	-0.09	0.30	0.13	0.38	619.00	12.00	0.90	
Sum Channel	-2.49	5.04	0.65	0.64	-0.22	1.22	0.57	1.20	619.00	12.00	3.66	
Average of Two Polygon Areas			**Background Noise Metric**									
Channel	*Noise Estimate*			Polgon 1	Polgon 2	Average						
Channel 1	3.29		Mean of Sum	0.65	2.84	1.75						
Channel 2	1.92		Std. dev. Of Sum	1.22	2.77	2.00						
Channel 3	1.26											
Sum Channel	5.99											

- All units are milliVolts.

TABLE 6-3 GPO EM BACKGROUND SURVEY BACKGROUND RESPONSE STATISTICS AND NOISE ESTIMATES*

GPO Background Survey												
Background Polygon 2												
Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*	
Channel 1	-1.31	9.54	1.30	1.17	0.61	1.35	0.93	3.07	216.00	10.00	4.05	
Channel 2	-0.58	7.91	0.85	0.65	0.04	1.03	0.59	2.04	218.00	8.00	3.09	
Channel 3	-0.46	3.66	0.37	0.31	0.14	0.49	0.34	1.09	216.00	10.00	1.47	
Sum Channel	-2.25	21.10	2.52	2.13	0.91	2.66	1.79	5.91	216.00	10.00	7.98	
Background Polygon 1												
Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*	
Channel 1	-0.63	5.94	0.93	0.87	0.53	0.91	0.42	0.96	673.00	0.00	2.73	
Channel 2	-1.02	4.27	0.66	0.52	0.02	0.78	0.42	1.16	673.00	0.00	2.34	
Channel 3	-1.10	5.29	0.53	0.49	0.16	0.66	0.30	0.78	673.00	0.00	1.98	
Sum Channel	-1.37	11.88	2.13	1.94	1.25	1.69	0.82	2.17	673.00	0.00	5.07	
Average of Two Polygon Areas			**Background Noise Metric**									
Channel	*Noise Estimate*			Polgon 1	Polgon 2	Average						
Channel 1	3.39		Mean of Sum	2.13	2.52	2.33						
Channel 2	2.72		Std. dev. Of Sum	1.69	2.66	2.18						
Channel 3	1.73											
Sum Channel	6.53											

*All units are milliVolts.

TABLE 6-4 GPO MAG SEEDED SURVEY BACKGROUND RESPONSE STATISTICS AND NOISE ESTIMATES*

GPO Seeded Survey Total Field Magnetics											
Background Polygon 2											
Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Total Field	51108.70	51131.95	51117.87	51116.93	51113.79	5.04	0.63	0.72	1422.00	0.00	15.13
Background Polygon 1											
Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Total Field	51104.66	51120.00	51114.34	51113.93	51112.81	2.65	0.44	0.46	557.00	0.00	7.96

- All units are nanoTeslas.

7.0 SELECTED ANOMALY REACQUISTION

7.0.1 Selected target reacquisition was demonstrated at the former Camp Croft GPO site on October 22, 2004. Reacquisition was accomplished by first establishing the preliminary target location based on the x and y coordinates on the dig sheet. A plastic pin flag, labeled with the unique target ID, was then placed in the ground at the preliminary location. Once all the flags had been located, a Schonstedt magnetometer was used to confirm the location of the anomaly around the flag within an approximate one meter search radius.

7.0.2 During field reacquisition, as written in the Work Plan, once all the flags for a grid have been located, as stated above, the wheel-mounted EM61-MK2 will be used to refine each target location. While collecting readings in continuous mode, the instrument will slowly be maneuvered over the preliminary target location in two perpendicular directions. Once the location of peak response in both directions is identified, the flag will be moved to the refined location and the peak response. The offset from the preliminary location will be noted and recorded on the dig sheet. The peak response will then be compared to the targeted response to ensure accurate reacquisition.

8.0 SUMMARY AND RECOMMENDATIONS

8.0.1 The EM61 MK2 instrument performed significantly better that the magnetometer for detecting items in this GPO. It is recommended that the EM61 MK2 system be used for production geophysical surveying. Wheel mode at a 0.5 meter line spacing is suitable for data acquisition unless ground significantly more difficult that that of the GPO is encountered.

8.0.2 Table 8-1 lists data quality objectives that have been defined from data collected during the GPO. Metric values will be used for DGM quality control and reporting. It should be noted that site conditions (i.e., terrain and cultural features) are not homogeneous over a project area. Measurements outside of a metric may not constitute a data quality deficiency. However, if a metric is exceeded a root-cause analysis will be performed. Failures and root-cause analyses will be reported to USAESCH, as well as corrective actions taken/implemented. Proposed revisions to metrics will also be submitted to USAESCH for concurrence.

TABLE 8-1 QUALITY CONTROL PROCEDURES, TESTS AND METRICS

Item #	Defineable Feature of Work	QC Test or procedure	Testing Frequency	Metric
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	≤ 3 mph*
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no significant errors in data positioning.
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.39 mV Ch 2 ≤ 2.72 mV Ch 3 ≤ 1.73 mV Sum(1,2,3) ≤ 6.53mV

*See Section 8.0.3.

8.0.3 The speed metric listed in Table 8-1, Item 1 was changed from 2 mph to 3 mph based on the following analysis. Eleven lines of the GPO were surveyed at three different speeds to determine the effect the variation of data collection speed on the detection of seed items. Three of the resurveyed lines pass over seed items and for each of these lines the average line speed was calculated and stacked data profiles of the SUM (Ch1, Ch2 & Ch3) were plotted to show response variation. The average line speed (Line Speed) was calculated by measuring the time to collect the line (dT) over a total line length (Distance).

EQUATION 1 $$\text{LineSpeed}(mph) = \frac{\text{Distance}(meters)}{\text{dT}(hours) * 1609.344(meters/mile)}$$

8.0.4 For Line 7 there was a break in data collection. The Line Speed was calculated for each section of the line and a weighted average was calculated to determine the average line speed. The average speed for the three lines was then calculated. The speeds and values used to calculate the average speeds are outlined in Tables 8-2, 8-3, and 8-4 below.

TABLE 8-2 SLOW SURVEY SPEED

Slow Speed (10/21/2004)

Line	Start hh:mm:ss.ss	Stop hh:mm:ss.ss	dT hh:mm:ss.ss	dT hh.hhhh	Distance m	Line Speed mph	Average Speed mph
7	12:20:59.87	12:21:46.67	00:00:46.80	0.0130	31.63	1.51	1.52
7	12:22:34.02	12:22:40.94	00:00:06.92	0.0019	4.89	1.58	
10	12:29:25.52	12:30:14.62	00:00:49.10	0.0136	36.52	1.66	
10.5	12:30:40.22	12:31:26.52	00:00:46.30	0.0129	36.52	1.76	
						Lines 7, 10 and 10.5	**1.65**

TABLE 8-3 MEDIUM SURVEY SPEED

Medium Speed (11/19/2004 A)

Line	Start hh:mm:ss.ss	Stop hh:mm:ss.ss	dT hh:mm:ss.ss	dT hh.hhhh	Distance m	Line Speed mph	Average Speed mph
7	16:41:55.45	16:42:17.20	00:00:21.75	0.0060	30.50	3.14	3.04
7.1	16:46:47.11	16:46:51.50	00:00:04.39	0.0012	4.72	2.41	
10	16:55:47.90	16:56:11.47	00:00:23.57	0.0065	36.52	3.47	
10.5	16:56:46.07	16:57:11.72	00:00:25.65	0.0071	36.52	3.18	
						Lines 7, 10 and 10.5	**3.23**

TABLE 8-4 FAST SURVEY SPEED

Fast Speed (11/19/2004 B)

Line	Start hh:mm:ss.ss	Stop hh:mm:ss.ss	dT hh:mm:ss.ss	dT hh.hhhh	Distance m	Line Speed mph	Average Speed mph
7	17:06:38.39	17:06:56.46	00:00:18.07	0.0050	30.50	3.78	3.68
7.1	17:07:41.28	17:07:44.74	00:00:03.46	0.0010	4.72	3.05	
10	17:14:11.41	17:14:32.83	00:00:21.42	0.0060	36.52	3.81	
10.5	17:15:13.20	17:15:36.27	00:00:23.07	0.0064	36.51	3.54	
						Lines 7, 10 and 10.5	**3.68**

8.0.5 Figures 21a, 21b and 21c (Appendix B) show profiles of the leveled and lag corrected SUM (Ch1, Ch2 & Ch3) for the 7, 10 and 10.5 meter lines, respectively. The seed item locations are displayed on the maps. Based on the peak responses in the profiles over the seed items, it is apparent that the difference in detection ability is not significant between the different speeds tested as seen in Table 8-5.

TABLE 8-5 SPEED RESPONSE COMPARISON

Seed Identifier	High Response	Mid Response	Low Response	Comments
B (Line 7)	Slow	Fast	Medium	Poorly defined peak
C (Line 10)	Slow	Medium	Fast	Peak response line
C (Line 10.5)	Slow	Fast	Medium	Off-Peak response line
D (Line 7)	Medium	Slow	Fast	Poorly defined peak
E (Line 7)	Medium	Slow	Fast	
J (Line 10)	Medium	n/a	n/a	Poorly defined peak
J (Line 10.5)	n/a	n/a	n/a	
N (Line 7)	Fast	Medium	Slow	Poorly defined peak
O (Line 10)	Slow	Medium	Fast	Off-Peak response line
O (Line 10.5)	Slow	Fast	Medium	Peak response line

APPENDIX A
TARGET LISTS

Zapata Engineering
Seeded GPO
Analytic Signal from Vertical Gradient
Camp Croft, South Carolina

Date of Survey: November 22, 2004

Targets	Target ID	NAD 83/UTM Zone 17N		Analytic Signal (nT/m)	Comments
		Easting (m)	Northing (m)		
1	GPOM-1	421299.00	3862010.50	97.60	
2	GPOM-2	421293.00	3862013.00	30.90	
3	GPOM-3	421298.50	3862014.50	95.70	
4	GPOM-4	421283.50	3862017.00	21.40	
5	GPOM-5	421289.50	3862017.50	61.00	
6	GPOM-6	421302.00	3862018.50	1301.60	
7	GPOM-7	421285.50	3862019.50	116.00	
8	GPOM-8	421288.00	3862020.00	67.70	
9	GPOM-9	421296.00	3862020.00	2189.70	
10	GPOM-10	421298.50	3862020.50	3197.40	
11	GPOM-11	421294.50	3862021.50	2761.10	
12	GPOM-12	421284.50	3862023.00	29.00	
13	GPOM-13	421274.00	3862023.50	3816.60	
14	GPOM-14	421289.50	3862024.00	224.50	
15	GPOM-15	421285.50	3862024.50	34.70	
16	GPOM-16	421278.00	3862025.50	157.80	
17	GPOM-17	421286.00	3862026.50	48.60	
18	GPOM-18	421282.50	3862027.50	251.30	
19	GPOM-19	421304.00	3862027.50	4716.10	
20	GPOM-20	421281.00	3862029.00	171.10	
21	GPOM-21	421274.00	3862030.00	145.40	
22	GPOM-22	421271.00	3862030.50	71.70	
23	GPOM-23	421278.00	3862031.50	476.90	
24	GPOM-24	421297.00	3862031.50	3849.60	
25	GPOM-25	421308.00	3862033.00	138.80	
26	GPOM-26	421273.50	3862033.50	1491.50	
27	GPOM-27	421269.50	3862034.50	1993.30	
28	GPOM-28	421295.50	3862034.50	336.80	
29	GPOM-29	421300.50	3862035.00	8596.30	
30	GPOM-30	421286.50	3862036.50	59.50	
31	GPOM-31	421284.00	3862037.00	53.10	
32	GPOM-32	421278.00	3862038.00	197.60	
33	GPOM-33	421287.50	3862038.00	43.10	
34	GPOM-34	421280.50	3862038.50	254.80	
35	GPOM-35	421290.50	3862038.50	43.70	
36	GPOM-36	421284.00	3862041.00	63.40	
37	GPOM-37	421288.00	3862041.50	49.30	
38	GPOM-38	421291.50	3862041.50	63.80	
39	GPOM-39	421274.50	3862042.50	121.20	
40	GPOM-40	421277.50	3862043.00	171.60	
41	GPOM-41	421293.50	3862043.00	157.60	
42	GPOM-42	421296.00	3862043.50	128.80	
43	GPOM-43	421277.50	3862045.00	51.50	
44	GPOM-44	421291.00	3862045.00	206.60	
45	GPOM-45	421286.50	3862045.50	1541.60	
46	GPOM-46	421278.00	3862047.50	129.70	
47	GPOM-47	421274.00	3862049.00	113.80	
48	GPOM-48	421282.00	3862050.00	85.10	

Zapata Engineering
Seeded Geophysical Prove Out (GPO)
EM61 MK2 Bottom Coil
Camp Croft, South Carolina

Date of Survey: October 21, 2004

Target Pick Table (EM61 MK2)

NOTE: SNR's were calculated from Background (Pre-seeded) Noise Estimates Statistics Revised with 2 Polygons.

Targets	Target ID	NAD 83/UTM Zone 17N		Grid Value (mV)				Signal to Noise Ratio (SNR)				Comments
		Easting (m)	Northing (m)	Channel 1	Channel 2	Channel 3	Sum (1,2,3)	Channel 1	Channel 2	Channel 3	Sum (1,2,3)	
1	GPOEM-1	421296.76	3862004.22	307.23	107.47	50.32	465.01	90.63	39.51	29.08	71.21	
2	GPOEM-2	421298.80	3862039.60	83.09	70.57	37.09	178.48	24.51	25.94	21.44	27.33	
3	GPOEM-3	421301.68	3862034.90	63.78	52.13	29.90	118.64	18.81	19.16	17.28	18.17	
4	GPOEM-4	421298.59	3862014.36	74.54	47.50	25.31	146.45	21.99	17.46	14.63	22.43	
5	GPOEM-5	421292.96	3862023.15	48.90	43.38	21.79	88.26	14.42	15.95	12.60	13.52	
6	GPOEM-6	421297.85	3862039.51	42.19	43.18	19.07	74.73	12.45	15.88	11.02	11.44	
7	GPOEM-7	421305.43	3862035.28	52.08	40.89	20.11	95.76	15.36	15.03	11.62	14.66	
8	GPOEM-8	421302.81	3862033.25	38.60	34.63	14.32	72.44	11.39	12.73	8.28	11.09	
9	GPOEM-9	421273.04	3862030.06	36.37	33.14	15.92	84.01	10.73	12.18	9.20	12.87	
10	GPOEM-10	421304.80	3862035.03	41.51	31.95	16.57	92.20	12.25	11.75	9.58	14.12	
11	GPOEM-11	421296.76	3862032.82	69.70	23.45	31.73	171.92	20.56	8.62	18.34	26.33	
12	GPOEM-12	421300.65	3862038.15	23.66	23.04	10.72	50.53	6.98	8.47	6.20	7.74	
13	GPOEM-13	421295.91	3862005.67	47.38	20.40	21.77	124.06	13.98	7.50	12.58	19.00	
14	GPOEM-14	421292.20	3862035.37	26.13	19.24	10.89	62.19	7.71	7.08	6.29	9.52	
15	GPOEM-15	421290.02	3862011.35	23.27	17.33	10.21	50.27	6.87	6.37	5.90	7.70	
16	GPOEM-16	421303.60	3862038.92	22.17	16.51	7.41	48.00	6.54	6.07	4.29	7.35	
17	GPOEM-17	421269.77	3862018.92	23.40	15.94	9.86	58.25	6.90	5.86	5.70	8.92	
18	GPOEM-18	421301.67	3862023.88	40.30	15.21	1.11	36.62	11.89	5.59	0.64	5.61	
19	GPOEM-19	421302.00	3862037.49	23.42	14.98	4.60	37.92	6.91	5.51	2.66	5.81	
20	GPOEM-20	421290.51	3862012.21	20.97	14.67	9.26	44.14	6.19	5.40	5.35	6.76	
21	GPOEM-21	421305.78	3862031.25	18.93	14.08	6.12	36.97	5.58	5.18	3.54	5.66	
22	GPOEM-22	421283.38	3862040.47	19.70	13.89	7.04	40.13	5.81	5.11	4.07	6.14	
23	GPOEM-23	421295.80	3862025.08	17.13	13.43	8.39	42.51	5.05	4.94	4.85	6.51	
24	GPOEM-24	421291.09	3862041.69	16.01	12.90	6.49	34.97	4.72	4.74	3.75	5.35	
25	GPOEM-25	421276.99	3862049.48	24.92	12.41	10.52	57.48	7.35	4.56	6.08	8.80	
26	GPOEM-26	421267.52	3862019.51	15.92	12.23	4.87	30.60	4.70	4.50	2.82	4.69	
27	GPOEM-27	421266.77	3862019.23	19.36	11.90	8.25	51.95	5.71	4.38	4.77	7.95	
28	GPOEM-28	421284.15	3862041.25	17.00	11.35	5.99	40.37	5.02	4.17	3.47	6.18	
29	GPOEM-29	421282.79	3862041.31	17.46	10.89	4.88	28.37	5.15	4.00	2.82	4.34	
30	GPOEM-30	421290.77	3862044.60	20.99	10.75	4.04	35.86	6.19	3.95	2.34	5.49	
31	GPOEM-31	421265.93	3862021.39	12.73	10.51	5.39	28.55	3.76	3.86	3.11	4.37	
32	GPOEM-32	421278.34	3862033.00	16.48	10.00	5.22	34.68	4.86	3.68	3.02	5.31	
33	GPOEM-33	421282.82	3862018.15	13.75	9.73	3.31	22.07	4.06	3.58	1.92	3.38	False Positive Selection from Pre positional Correction
34	GPOEM-34	421270.07	3862017.83	20.23	9.60	7.37	44.71	5.97	3.53	4.26	6.85	
35	GPOEM-35	421291.98	3862040.70	13.21	9.32	4.03	24.72	3.90	3.43	2.33	3.79	
36	GPOEM-36	421287.33	3862043.51	15.33	9.04	4.71	29.08	4.52	3.32	2.72	4.45	

Zapata Engineering
Seeded Geophysical Prove Out (GPO)
EM61 MK2 Bottom Coil
Camp Croft, South Carolina

Date of Survey: October 21, 2004

Target Pick Table (EM61 MK2)

NOTE: SNR's were calculated from Background (Pre-seeded) Noise Estimates Statistics Revised with 2 Polygons.

Targets	Target ID	NAD 83/UTM Zone 17N		Grid Value (mV)				Signal to Noise Ratio (SNR)				Comments
		Easting (m)	Northing (m)	Channel 1	Channel 2	Channel 3	Sum (1,2,3)	Channel 1	Channel 2	Channel 3	Sum (1,2,3)	
37	GPOEM-37	421292.96	3862011.03	14.04	9.02	6.58	27.84	4.14	3.32	3.80	4.26	
38	GPOEM-38	421285.44	3862013.48	18.70	8.99	7.44	37.53	5.52	3.31	4.30	5.75	
39	GPOEM-39	421292.67	3862010.06	13.81	8.94	6.06	26.11	4.07	3.29	3.51	4.00	
40	GPOEM-40	421307.22	3862034.96	12.19	8.86	3.88	28.61	3.60	3.26	2.24	4.38	
41	GPOEM-41	421287.87	3862042.70	11.94	8.62	3.93	23.08	3.52	3.17	2.27	3.53	
42	GPOEM-42	421273.77	3862016.85	12.42	8.49	5.04	32.39	3.66	3.12	2.91	4.96	
43	GPOEM-43	421306.56	3862037.39	14.83	8.09	5.45	34.64	4.37	2.97	3.15	5.30	
44	GPOEM-44	421269.94	3862028.81	11.39	7.50	4.71	21.78	3.36	2.76	2.72	3.33	
45	GPOEM-45	421285.84	3862014.70	16.13	7.21	5.82	30.71	4.76	2.65	3.36	4.70	
46	GPOEM-46	421297.31	3862023.24	19.52	6.56	1.47	23.01	5.76	2.41	0.85	3.52	
47	GPOEM-47	421274.87	3862049.56	5.21	6.43	2.47	16.46	1.54	2.36	1.43	2.52	
48	GPOEM-48	421266.87	3862020.44	10.97	5.48	3.71	24.16	3.24	2.01	2.14	3.70	
49	GPOEM-49	421306.13	3862032.19	4.51	5.41	2.12	14.09	1.33	1.99	1.22	2.16	
50	GPOEM-50	421291.41	3862015.08	12.69	5.33	3.99	17.74	3.74	1.96	2.31	2.72	
51	GPOEM-51	421307.09	3862033.93	5.65	5.17	2.38	12.41	1.67	1.90	1.38	1.90	
52	GPOEM-52	421279.54	3862012.58	8.86	5.08	3.35	15.59	2.61	1.87	1.94	2.39	
53	GPOEM-53	421287.97	3862039.34	5.11	5.00	2.13	11.97	1.51	1.84	1.23	1.83	
54	GPOEM-54	421280.91	3862049.96	12.64	4.94	4.65	25.74	3.73	1.81	2.69	3.94	
55	GPOEM-55	421288.60	3862025.31	10.50	4.70	2.94	14.55	3.10	1.73	1.70	2.23	
56	GPOEM-56	421288.69	3862038.99	5.59	4.59	1.46	9.67	1.65	1.69	0.84	1.48	
57	GPOEM-57	421283.90	3862031.95	6.52	4.04	0.66	10.30	1.92	1.49	0.38	1.58	
58	GPOEM-58	421306.07	3862033.31	4.04	3.91	1.55	7.93	1.19	1.44	0.90	1.21	
59	GPOEM-59	421281.51	3862049.09	6.01	3.87	2.19	12.08	1.77	1.42	1.27	1.85	
60	GPOEM-60	421271.10	3862023.84	5.61	3.80	1.12	8.33	1.65	1.40	0.65	1.28	False Positive Selection from Pre positional Correction
61	GPOEM-61	421307.05	3862032.84	3.44	3.66	1.37	8.11	1.02	1.35	0.79	1.24	
62	GPOEM-62	421276.19	3862018.61	4.93	3.60	1.59	12.10	1.45	1.32	0.92	1.85	
63	GPOEM-63	421286.64	3862026.22	4.55	3.40	0.01	9.58	1.34	1.25	0.01	1.47	
64	GPOEM-64	421271.17	3862027.11	4.91	3.36	1.92	8.38	1.45	1.24	1.11	1.28	
65	GPOEM-65	421285.45	3862009.71	7.58	3.18	2.72	11.81	2.24	1.17	1.57	1.81	
66	GPOEM-66	421286.73	3862010.74	5.85	3.06	2.02	8.59	1.73	1.12	1.17	1.32	
67	GPOEM-67	421278.58	3862021.07	10.88	2.96	1.37	10.88	3.21	1.09	0.79	1.67	
68	GPOEM-68	421287.27	3862012.15	9.94	2.78	1.42	9.94	2.93	1.02	0.82	1.52	
69	GPOEM-69	421274.34	3862029.44	15.12	2.47	4.46	36.08	4.46	0.91	2.58	5.53	
70	GPOEM-70	421287.16	3862025.39	7.68	2.42	0.38	15.79	2.27	0.89	0.22	2.42	
71	GPOEM-71	421269.30	3862026.02	7.29	1.91	0.91	7.29	2.15	0.70	0.52	1.12	
72	GPOEM-72	421279.20	3862043.04	6.94	2.38	1.12	6.94	2.05	0.88	0.65	1.06	
73	GPOEM-73	421299.99	3862031.31	6.19	0.98	0.26	5.37	1.83	0.36	0.15	0.82	

Zapata Engineering
Seeded Geophysical Prove Out (GPO)
EM61 MK2 Bottom Coil
Camp Croft, South Carolina

Date of Survey: October 21, 2004

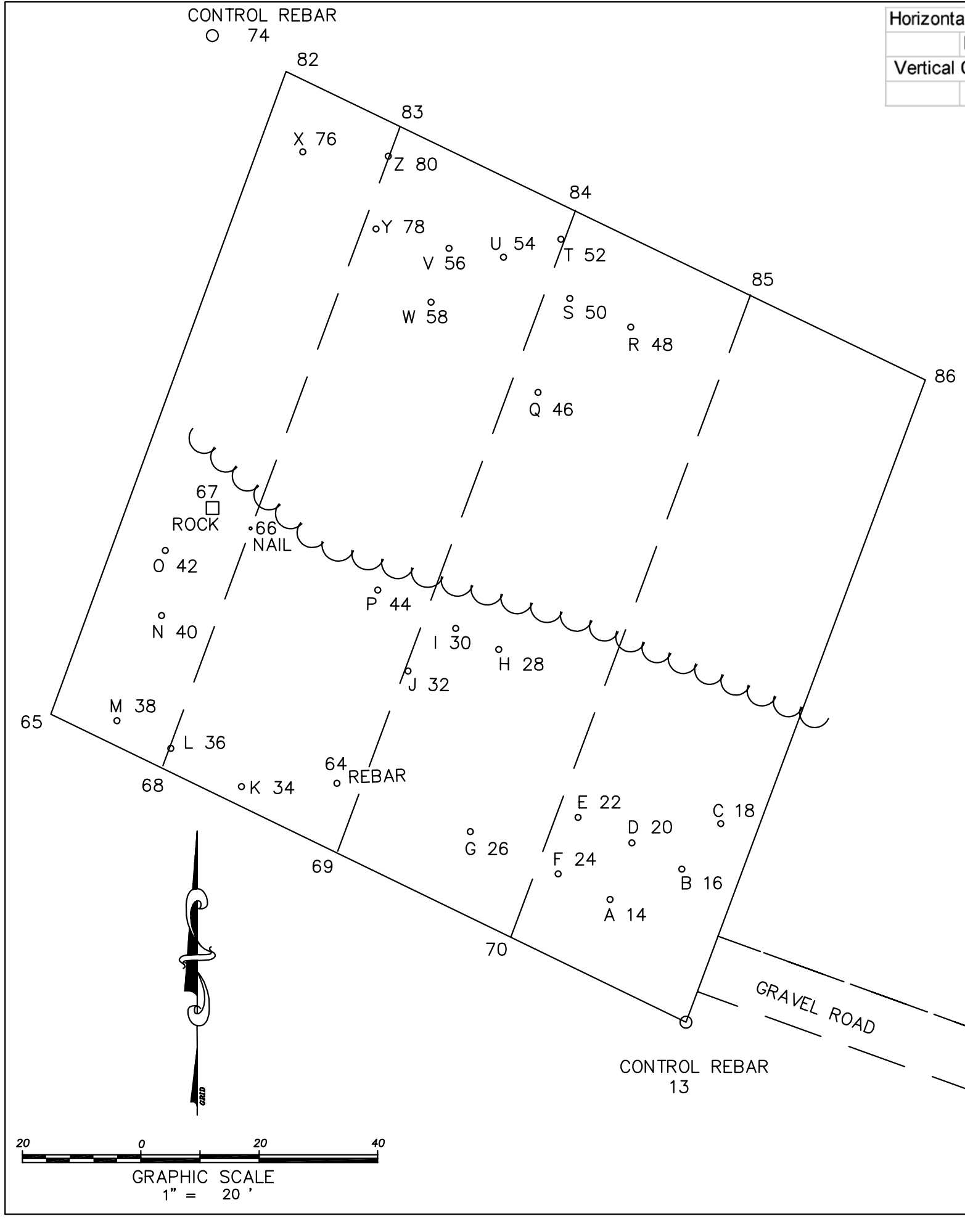
Target Pick Table (EM61 MK2)

NOTE: SNR's were calculated from Background (Pre-seeded) Noise Estimates Statistics Revised with 2 Polygons.

Targets	Target ID	NAD 83/UTM Zone 17N		Grid Value (mV)				Signal to Noise Ratio (SNR)				Comments
		Easting (m)	Northing (m)	Channel 1	Channel 2	Channel 3	Sum (1,2,3)	Channel 1	Channel 2	Channel 3	Sum (1,2,3)	
74	GPOEM-74	421293.86	3862013.34	5.64	2.02	2.24	7.99	1.66	0.74	1.29	1.22	
75	GPOEM-75	421288.08	3862020.01	4.16	2.23	1.30	7.40	1.23	0.82	0.75	1.13	
76	GPOEM-76	421284.82	3862024.34	4.09	1.11	0.25	5.10	1.21	0.41	0.14	0.78	
77	GPOEM-77	421276.78	3862021.08	3.88	0.78	0.26	5.63	1.15	0.29	0.15	0.86	False Positive Selection from Pre positional Correction
78	GPOEM-78	421297.89	3862034.53	3.63	1.06	1.19	4.97	1.07	0.39	0.69	0.76	
79	GPOEM-79	421280.94	3862026.23	3.57	0.93	0.25	4.43	1.05	0.34	0.14	0.68	
80	GPOEM-80	421292.04	3862042.88	3.47	2.36	1.71	7.25	1.02	0.87	0.99	1.11	
81	GPOEM-81	421298.89	3862037.90	3.41	1.92	1.60	7.13	1.01	0.70	0.92	1.09	
82	GPOEM-82	421289.17	3862036.56	3.23	1.89	0.60	5.74	0.95	0.69	0.34	0.88	
83	GPOEM-83	421280.87	3862044.99	3.10	1.27	0.26	4.64	0.91	0.47	0.15	0.71	
84	GPOEM-84	421288.30	3862037.53	2.57	1.63	0.52	7.26	0.76	0.60	0.30	1.11	
85	GPOEM-85	421294.15	3862040.20	2.19	1.94	1.00	5.67	0.65	0.71	0.58	0.87	
86	GPOEM-86	421293.43	3862036.69	1.81	1.33	0.60	5.34	0.53	0.49	0.35	0.82	
87	GPOEM-87	421283.28	3862043.56	1.98	1.39	1.04	4.82	0.58	0.51	0.60	0.74	
88	GPOEM-88	421294.37	3862029.08	1.93	1.18	0.70	4.35	0.57	0.43	0.40	0.67	
89	GPOEM-89	421301.60	3862025.02	2.30	0.67	0.91	4.15	0.68	0.25	0.52	0.64	
90	GPOEM-90	421268.59	3862024.76	3.60	1.89	1.72	7.27	1.06	0.69	0.99	1.11	
91	GPOEM-91	421288.38	3862016.93	2.67	1.84	1.30	5.39	0.79	0.68	0.75	0.83	
92	GPOEM-92	421275.66	3862027.88	3.33	1.35	0.45	5.15	0.98	0.50	0.26	0.79	
93	GPOEM-93	421290.42	3862008.31	2.93	1.25	0.67	4.99	0.87	0.46	0.39	0.76	
94	GPOEM-94	421285.58	3862021.17	2.46	1.23	0.49	4.11	0.72	0.45	0.28	0.63	
95	GPOEM-95	421291.54	3862037.56	2.18	1.42	0.26	3.77	0.64	0.52	0.15	0.58	
96	GPOEM-96	421292.46	3862024.96	1.63	1.29	1.03	3.46	0.48	0.47	0.60	0.53	
97	GPOEM-97	421270.37	3862024.95	1.90	0.67	0.44	3.34	0.56	0.25	0.25	0.51	
98	GPOEM-98	421291.28	3862018.46	1.89	0.99	1.06	3.29	0.56	0.36	0.61	0.50	
99	GPOEM-99	421284.31	3862019.07	1.62	1.13	0.50	3.24	0.48	0.42	0.29	0.50	
100	GPOEM-100	421284.50	3862022.89	1.55	1.00	0.50	3.20	0.46	0.37	0.29	0.49	

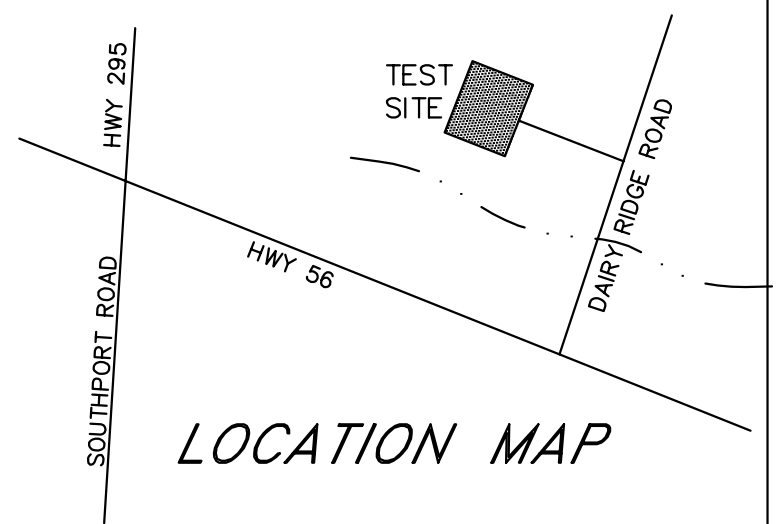
* red indicates SNR of less than 1

APPENDIX B
FIGURES



Horizontal Coordinates:	
NAD 83 UTM, Zone 0017, Meters	
Vertical Coordinates:	
NAVD 88,Meters	

BPB Point#	UTM COORDINATES		ELEVATIONS		DESCRIPTION
	NORTHING	EASTERN	ITEM	GROUND	
1	3,861,976.5100	421,451.9800		226.6071	Nail
2	3,862,022.7418	421,543.0242		227.3646	Nail
7	3,862,196.9687	425,571.8989		259.9215	USGS EC 2394
8	3,864,519.2468	422,339.7672		238.3608	USGS KOHLER
9	3,862,174.7779	425,556.4680		260.0787	USGS TINSLEY
13	3,862,004.2186	421,296.7632		224.8809	CP - REBAR
14	3,862,010.5406	421,292.8594	224.1590	224.5204	A
16	3,862,012.0957	421,296.5508	223.9587	224.5376	B
18	3,862,014.4414	421,298.5590	224.2014	224.4749	C
20	3,862,013.4508	421,293.9808	223.9226	224.4855	D
22	3,862,014.7668	421,291.2108	224.0687	224.4449	E
24	3,862,011.8540	421,290.1873	224.1649	224.4670	F
26	3,862,014.0293	421,285.6615	223.9275	224.4075	G
28	3,862,023.4092	421,287.1344	223.9416	224.2245	H
30	3,862,024.4912	421,284.9154	223.9104	224.2073	I
32	3,862,022.2986	421,282.4621	223.6319	224.2746	J
34	3,862,016.3548	421,273.8865	223.9943	224.3609	K
36	3,862,018.3215	421,270.2518	224.0492	224.3304	L
38	3,862,019.7475	421,267.4792	223.9206	224.2337	M
40	3,862,025.1577	421,269.7758	223.6044	224.1591	N
42	3,862,028.5113	421,269.9692	223.3447	224.0457	O
44	3,862,026.4697	421,280.9040	223.8801	224.1924	P
46	3,862,036.6394	421,289.1602	222.6095	223.0190	Q
48	3,862,040.0025	421,293.9331	222.1090	222.4809	R
50	3,862,041.4820	421,290.7936	221.8157	222.2945	S
52	3,862,044.5280	421,290.3359	221.3624	221.8928	T
54	3,862,043.6057	421,287.3836	221.6320	222.0740	U
56	3,862,044.0608	421,284.5767	221.6753	222.1443	V
58	3,862,041.2888	421,283.6473	222.1961	222.6078	W
64	3,862,016.5213	421,278.7975		224.4375	REBAR
65	3,862,020.0813	421,264.0778		224.2356	GRID
66	3,862,029.6436	421,274.3555		224.1361	NAIL
67	3,862,030.6882	421,272.3905		224.1398	ROCK
68	3,862,017.4265	421,269.8380		224.3647	ROPE
69	3,862,013.0330	421,278.8418		224.4470	ROPE
70	3,862,008.6167	421,287.7578		224.4928	ROPE
74	3,862,055.0136	421,272.4001		221.3427	CP REBAR
76	3,862,049.0253	421,277.0479	221.5595	221.8977	X
78	3,862,045.0609	421,280.8223	221.7486	222.1700	Y
80	3,862,048.8086	421,281.4519	221.3446	221.7424	Z
82	3,862,053.1579	421,276.1866		221.5129	GRID
83	3,862,050.3148	421,282.0603		221.6319	FLAG
84	3,862,046.0047	421,291.0831		221.7634	FLAG
85	3,862,041.6592	421,300.0999		222.0299	FLAG
86	3,862,037.2733	421,309.0904		222.2810	GRID



LOCATION MAP

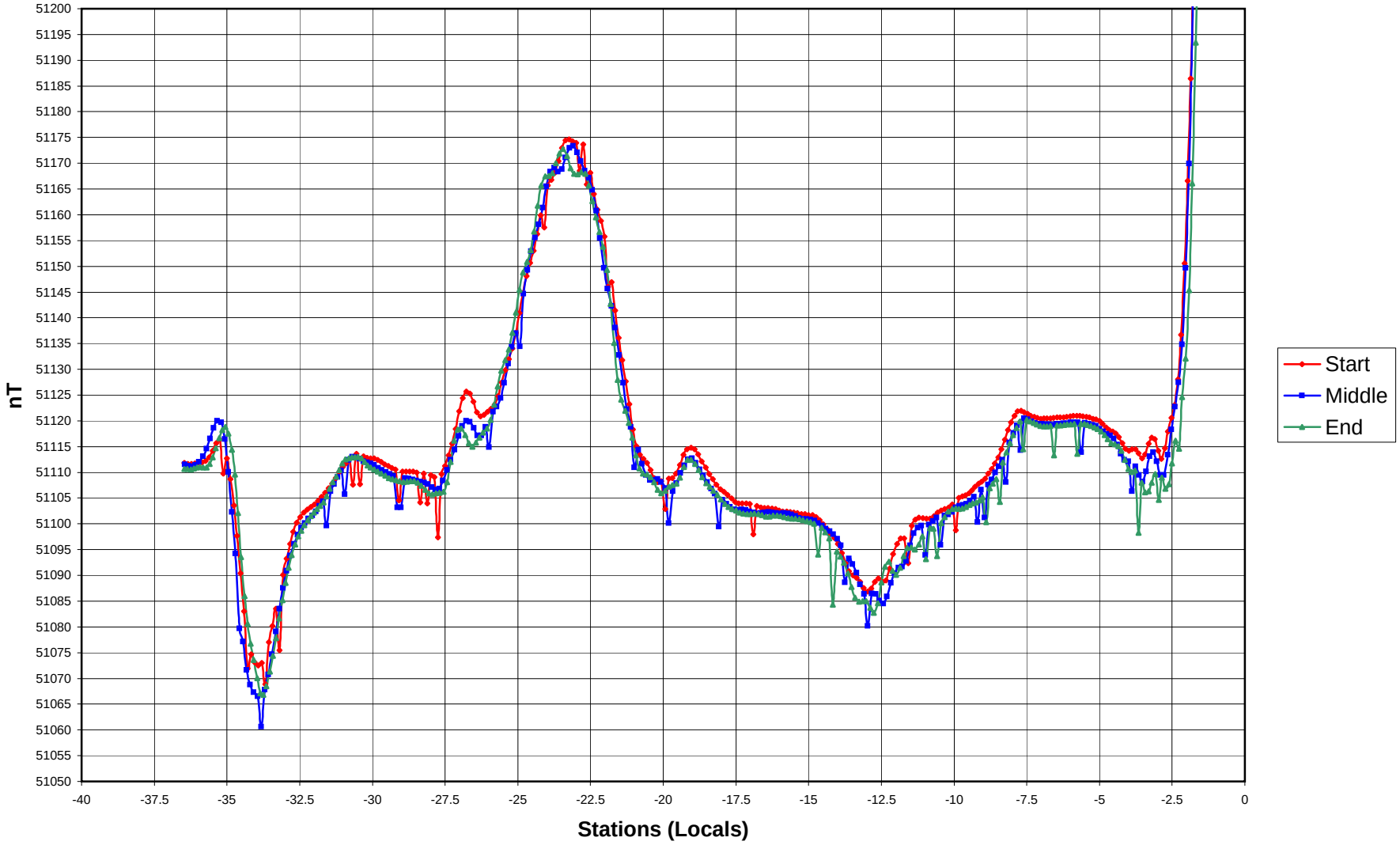
ZAPATA ENGINEERING
TRUST ● INTEGRITY ● QUALITY
1100 KENILWORTH AVENUE CHARLOTTE, NC 28204
E-MAIL: ZAPATA@ZAPENG.COM
PHONE: (704) 358-8240
FAX: (704) 358-8342
WEB SITE: WWW.ZAPENG.COM

U.S. ARMY
ENGINEERING SUPPORT CENTER
HUNTSVILLE, ALABAMA

FORMER CAMP CROFT OE REMOVAL
AS-BUILT SEED ITEM MAP

PROJECT #:	DATE:	DRAWN BY:	CHECKED BY:	SCALE:	FIGURE:
2615	NOV. 04	RLN	DSW	1" = 20'	1

Figure 2 - Diurnal Drift for 10/23/04 Seeded Magnetics Survey



10/23/04 - AM Static Test - Total Field Magnetics

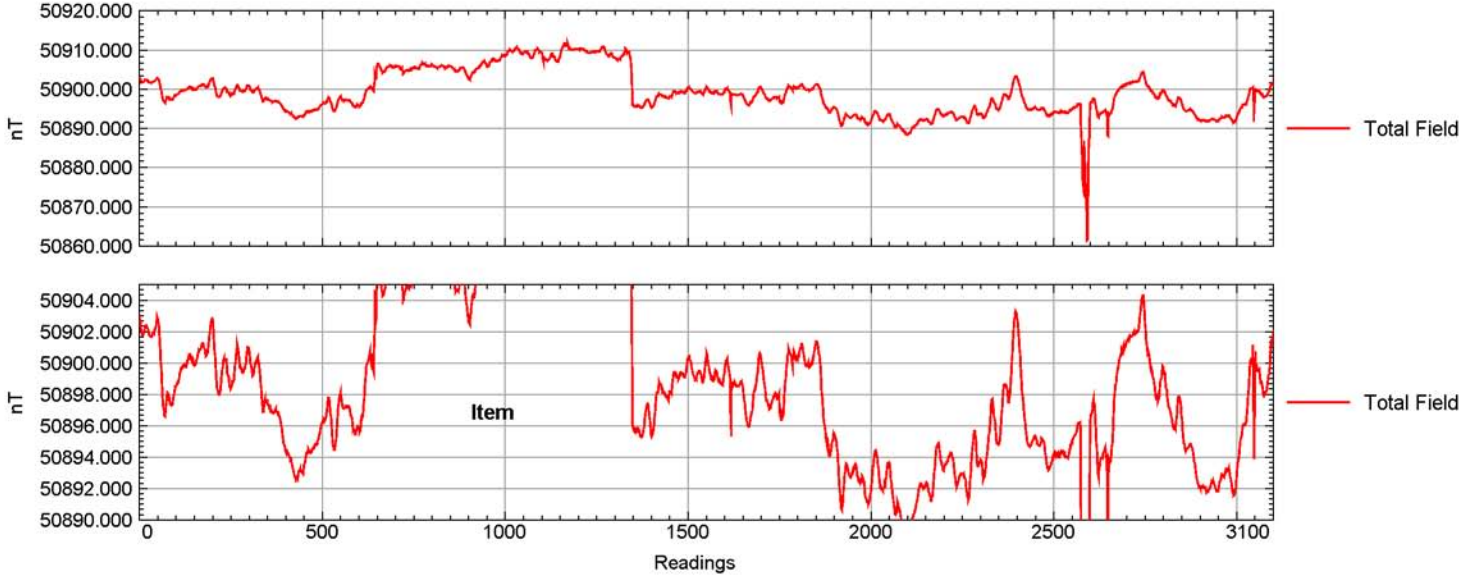


Figure 3a

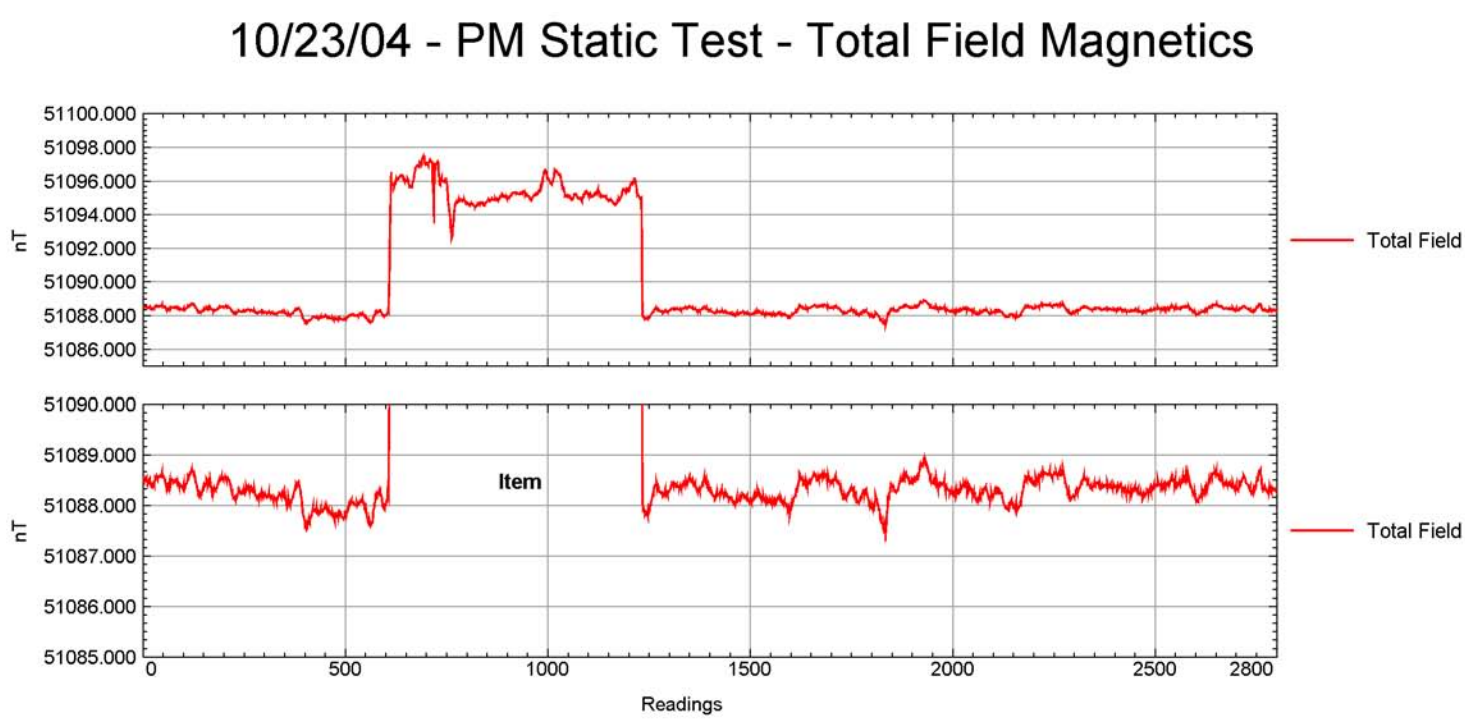

10/23/04 - PM Static Test - Total Field Magnetics
51100.000
51098.000
51096.000
51094.000
51092.000
51090.000
51088.000
51086.000
nT
Total Field
51090.000
51089.000
51088.000
51087.000
51086.000
51085.000
nT
Item
Total Field
0
500
1000
1500
2000
2500
2800
Readings

Figure 3b

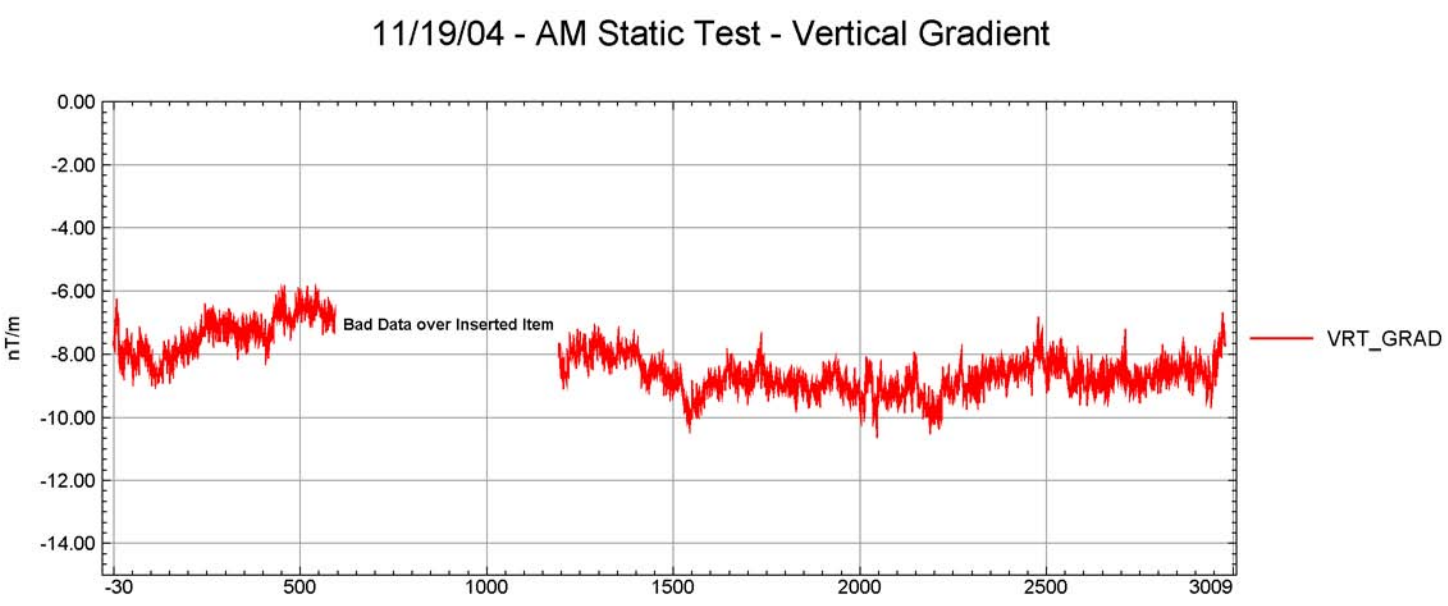


Figure 3C

2004/11/19

11/19/04 - PM Static Test - Vertical Gradient

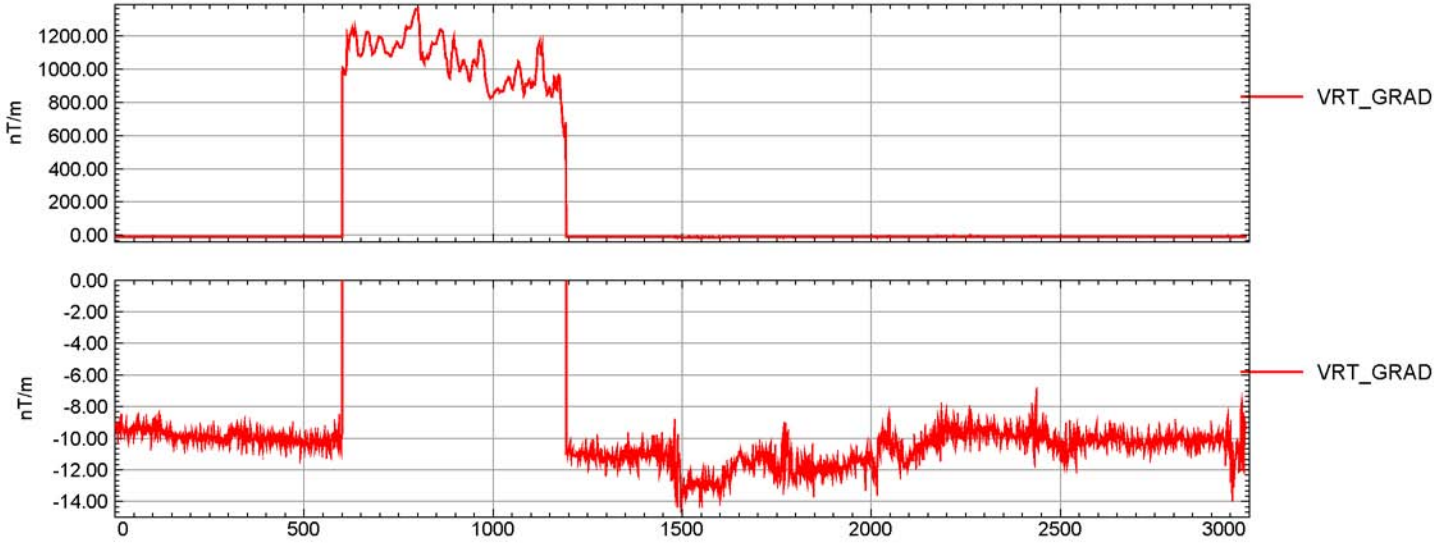


Figure 3D

2004/11/19

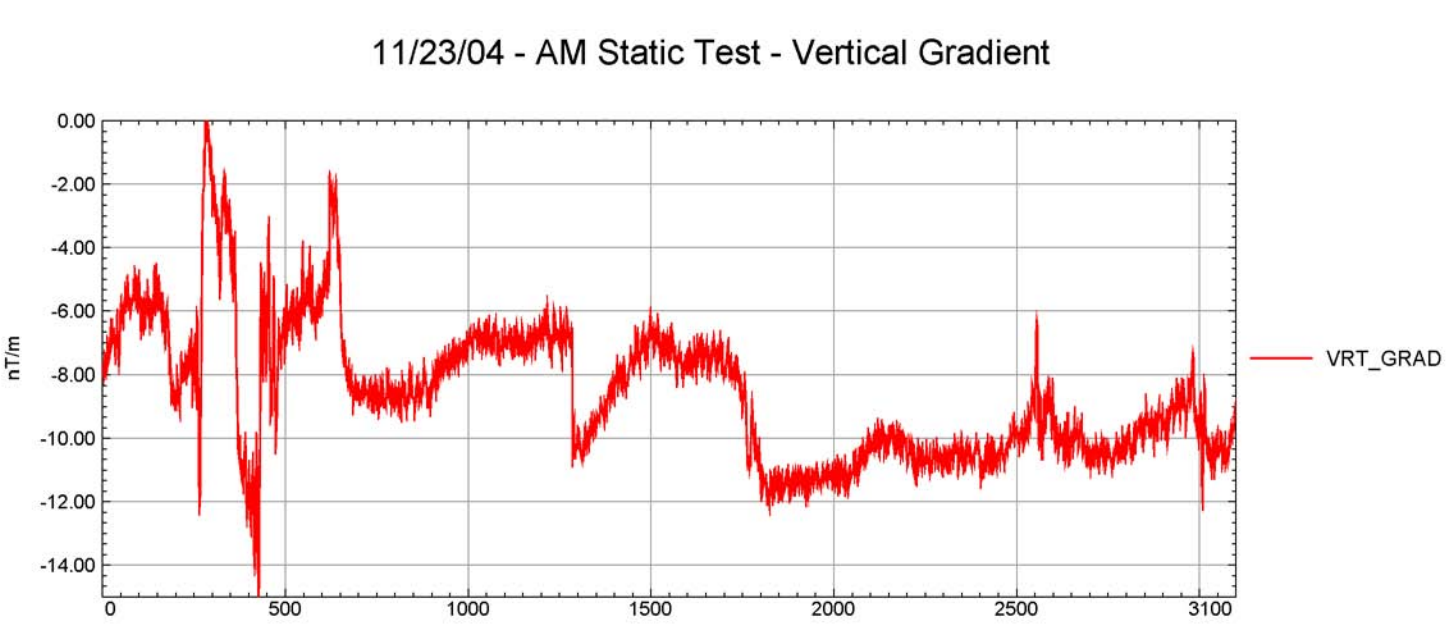


Figure 3E

2004/11/23

11/23/04 - PM Static Test - Vertical Gradient

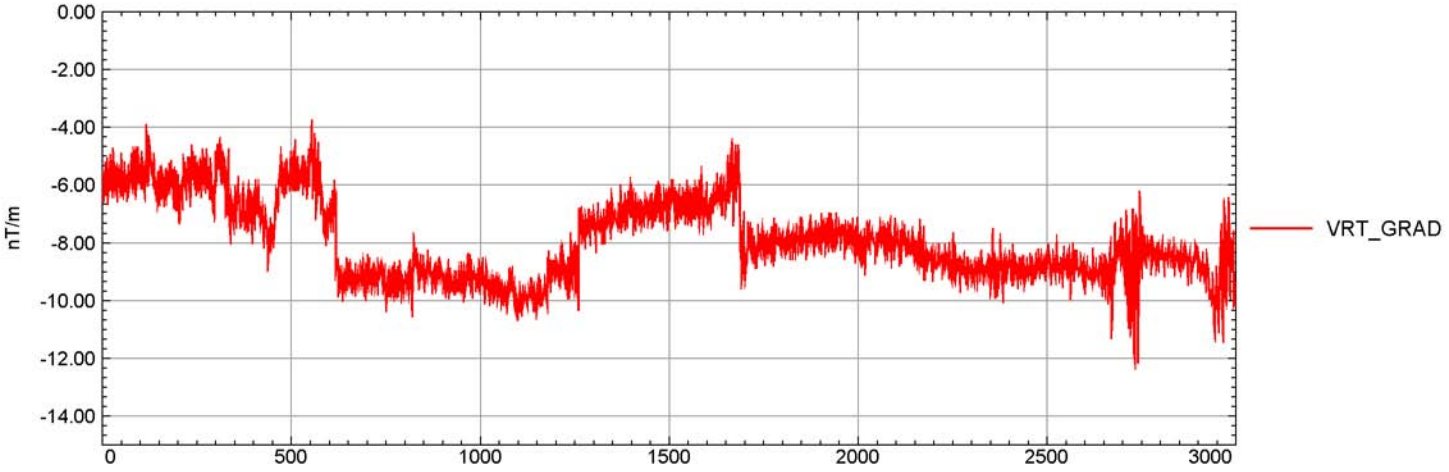


Figure 3F

2004/11/23

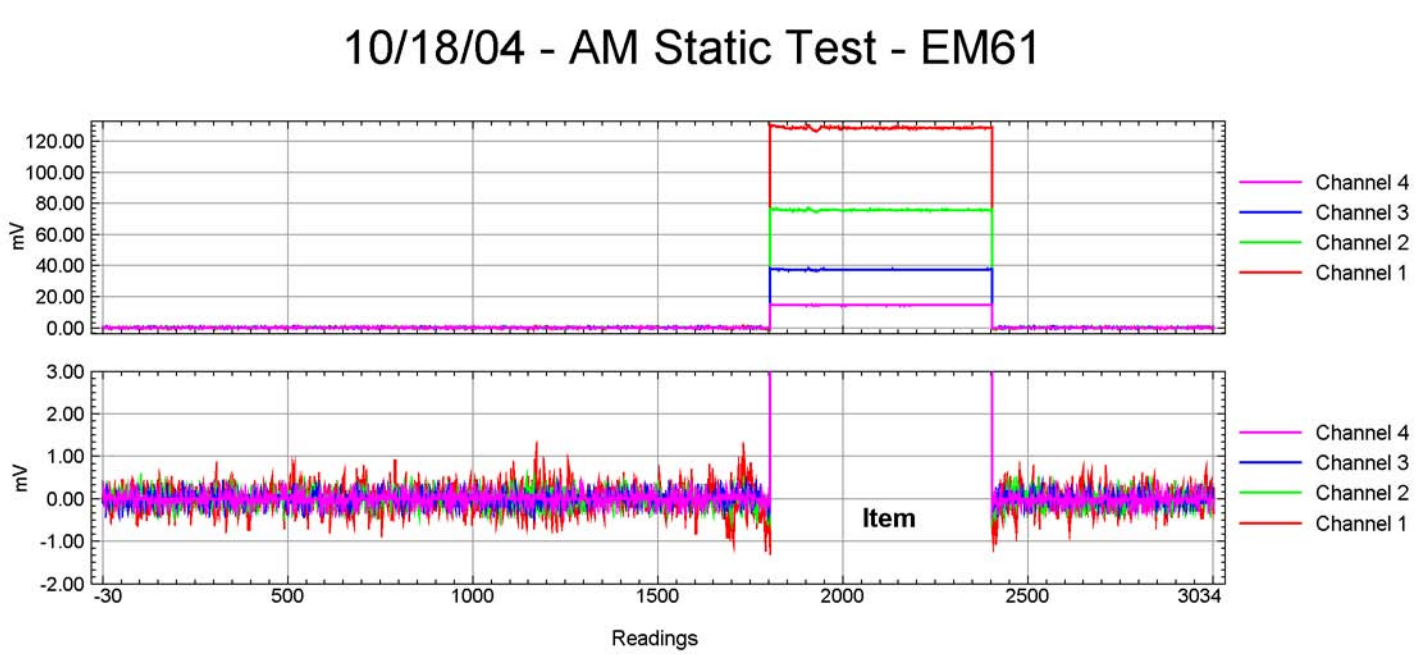

10/18/04 - AM Static Test - EM61
mV
120.00
100.00
80.00
60.00
40.00
20.00
0.00
Channel 4
Channel 3
Channel 2
Channel 1
mV
3.00
2.00
1.00
0.00
-1.00
-2.00
Item
-30
500
1000
1500
2000
2500
3034
Readings

Figure 4a

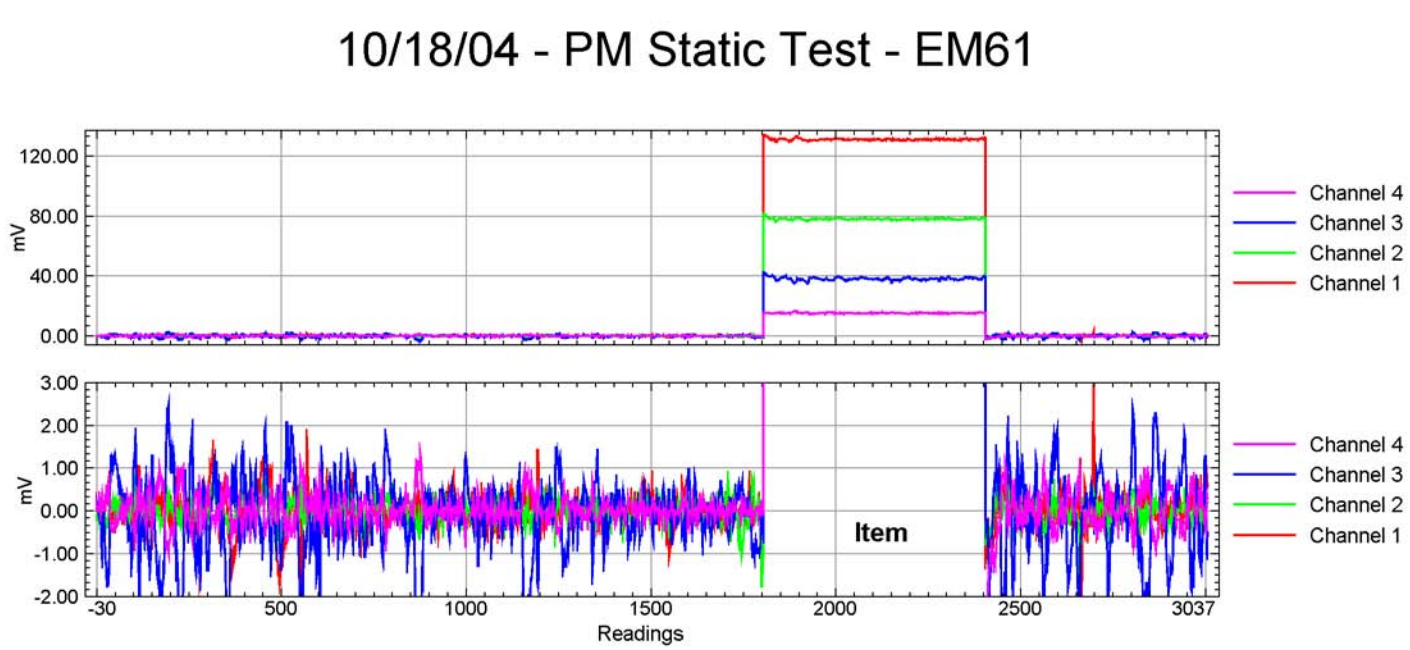

10/18/04 - PM Static Test - EM61
120.00
80.00
40.00
0.00
mV
Channel 4
Channel 3
Channel 2
Channel 1
3.00
2.00
1.00
0.00
-1.00
-2.00
mV
Item
-30
500
1000
1500
2000
2500
3037
Readings
Channel 4
Channel 3
Channel 2
Channel 1

Figure 4b

10/22/04 - AM Static Test - EM61

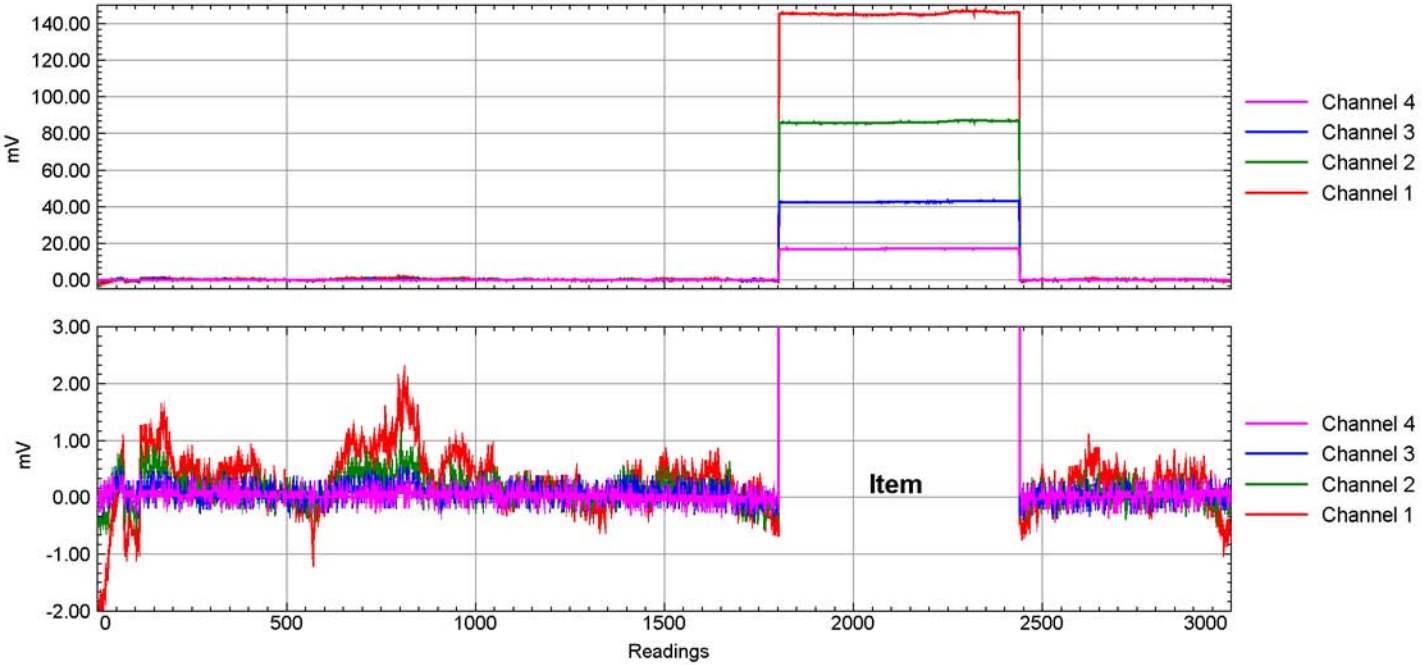


Figure 4c

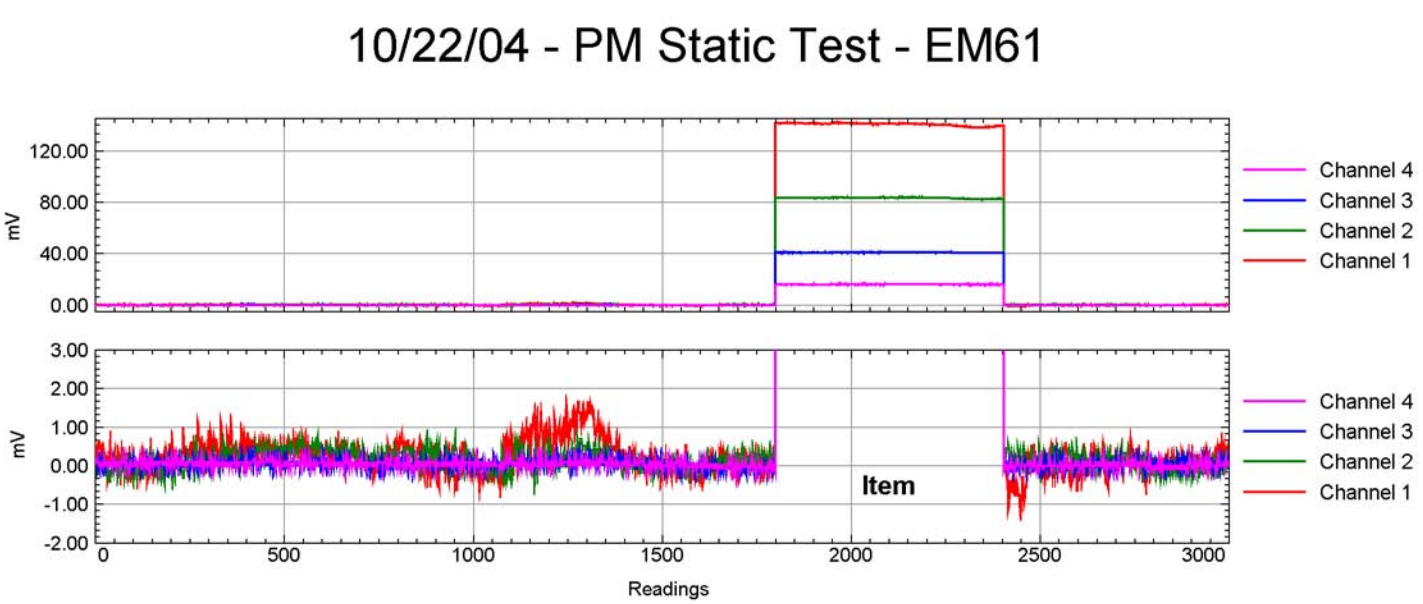

10/22/04 - PM Static Test - EM61
mV
120.00
80.00
40.00
0.00
Channel 4
Channel 3
Channel 2
Channel 1
mV
3.00
2.00
1.00
0.00
-1.00
-2.00
Item
0
500
1000
1500
2000
2500
3000
Readings
Channel 4
Channel 3
Channel 2
Channel 1

Figure 4d

11/19/04 - AM Static Test - EM61

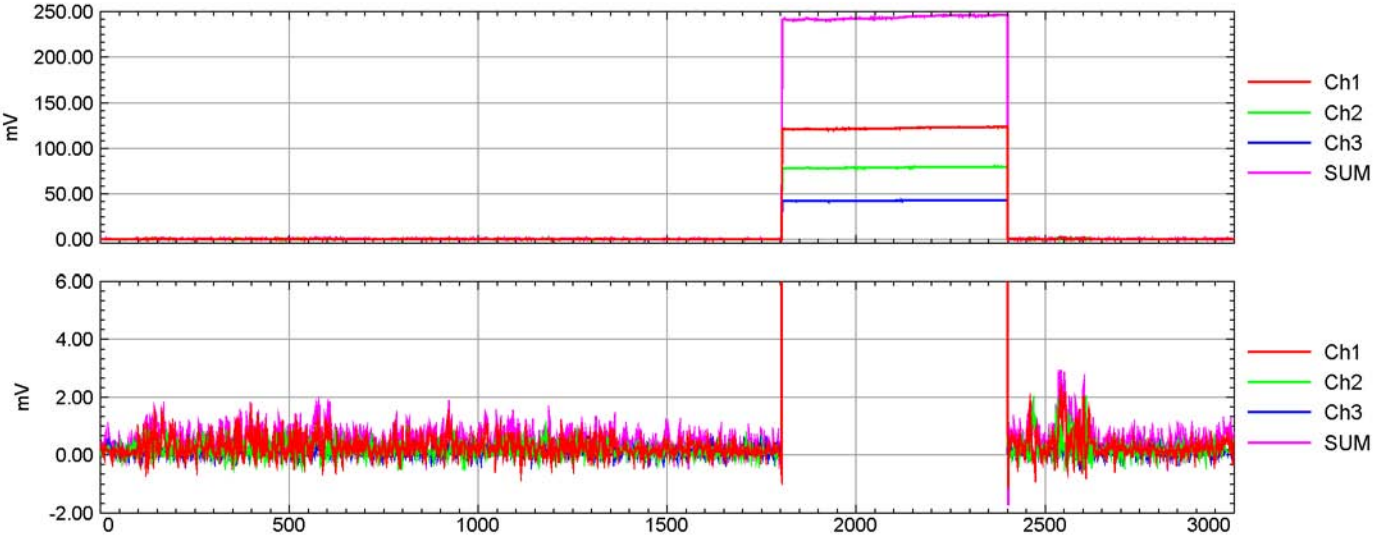


Figure 4E

2004/11/19

11/19/04 - PM Static Test - EM61

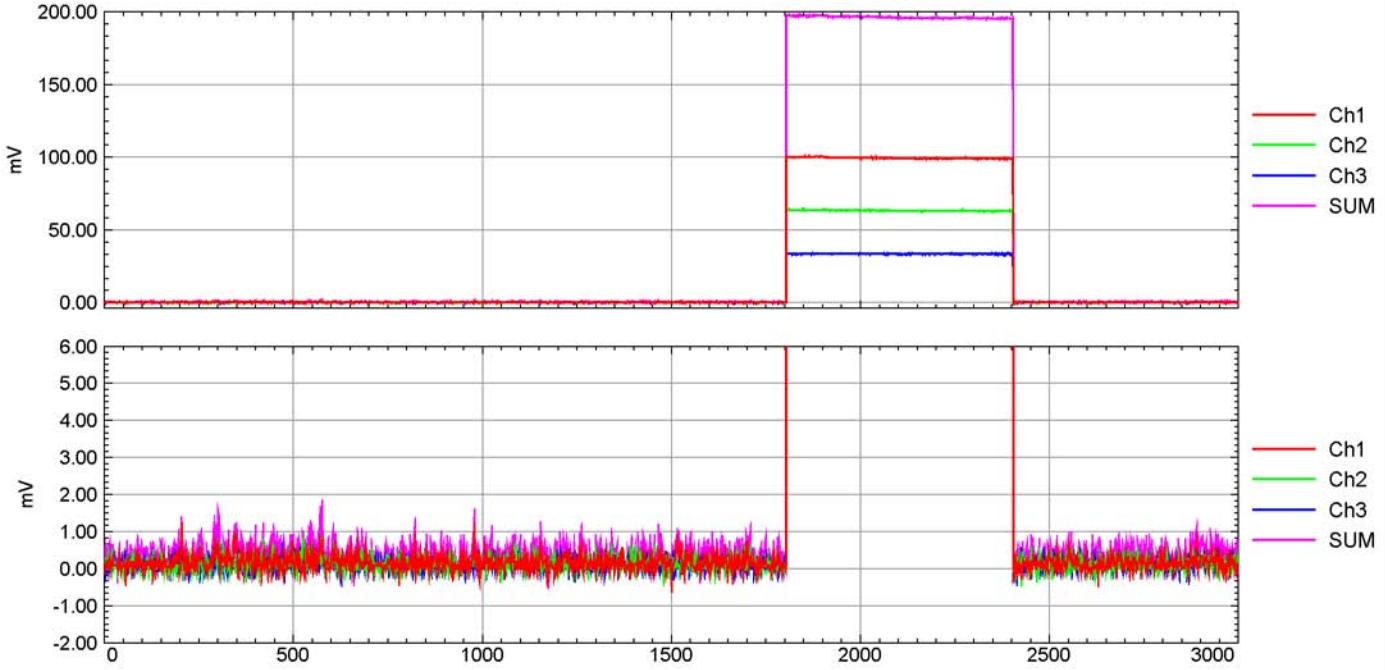
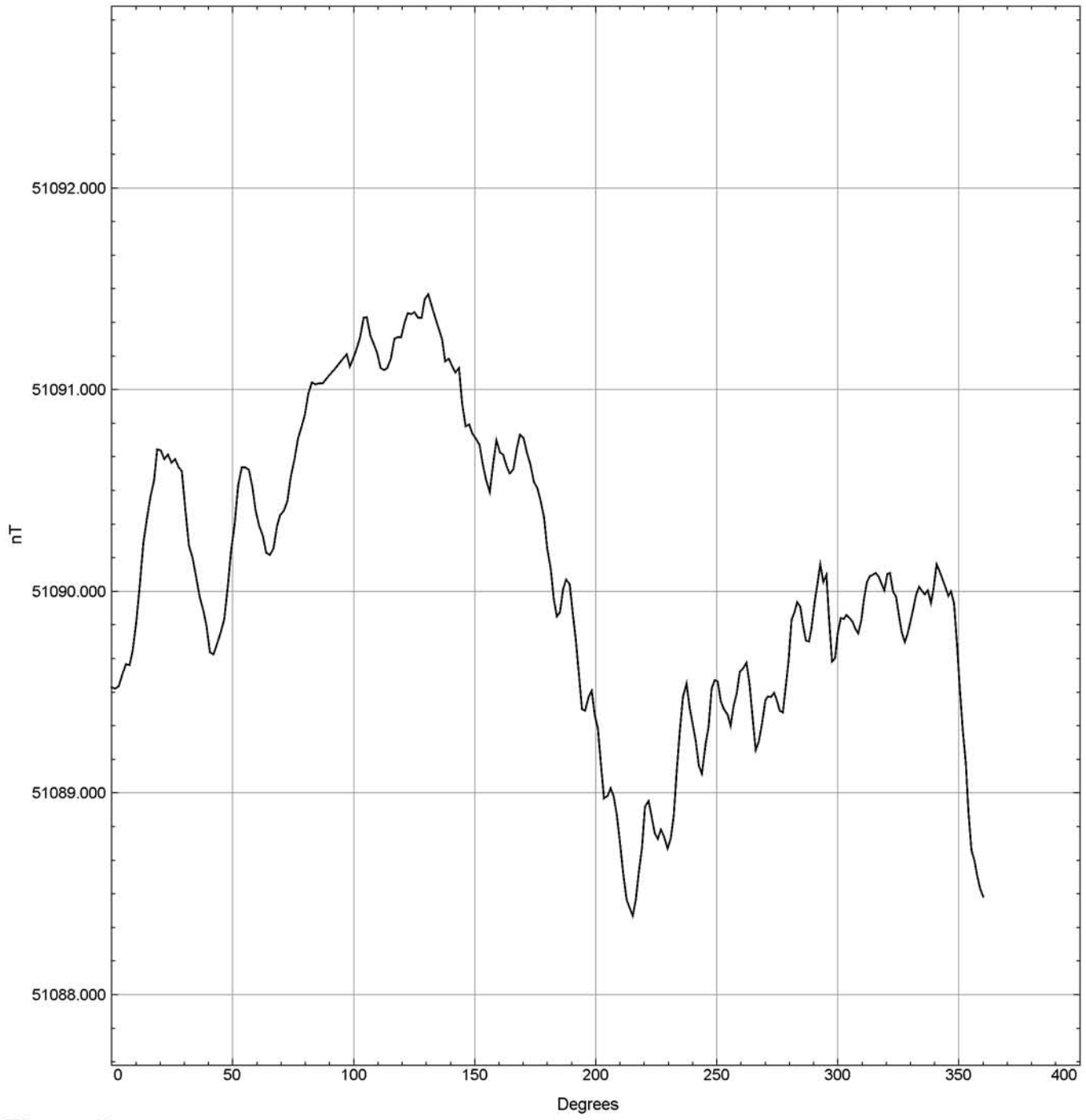


Figure 4F

2004/11/19

Azimuth Test - Total Field Magnetics



Legend

Line

Amplitude offset exceeds tolerance.

Figure 5

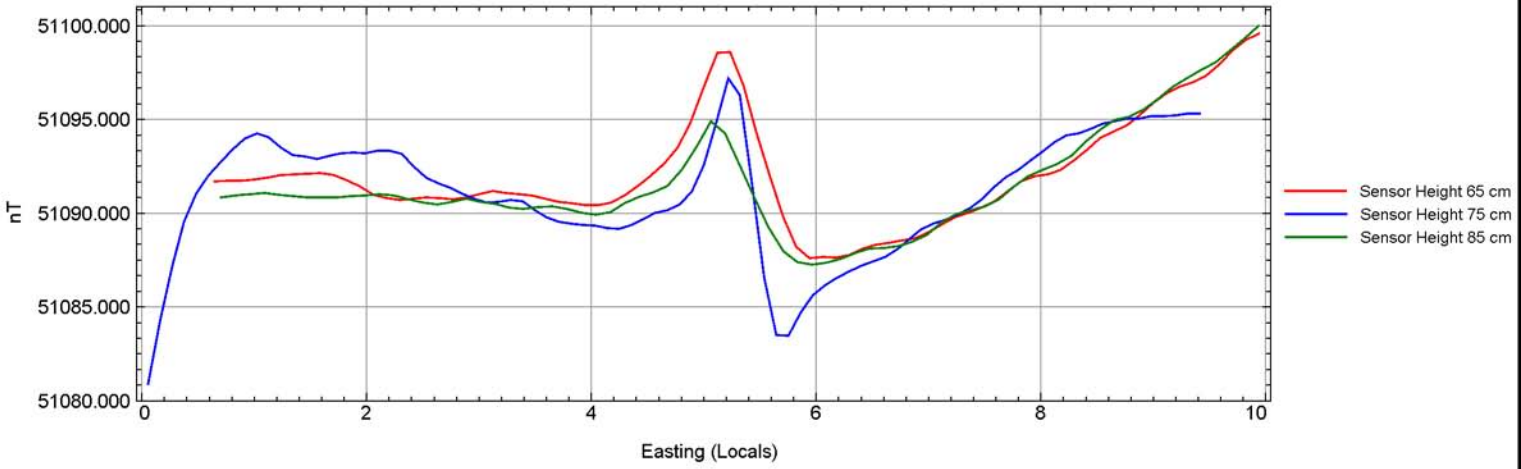
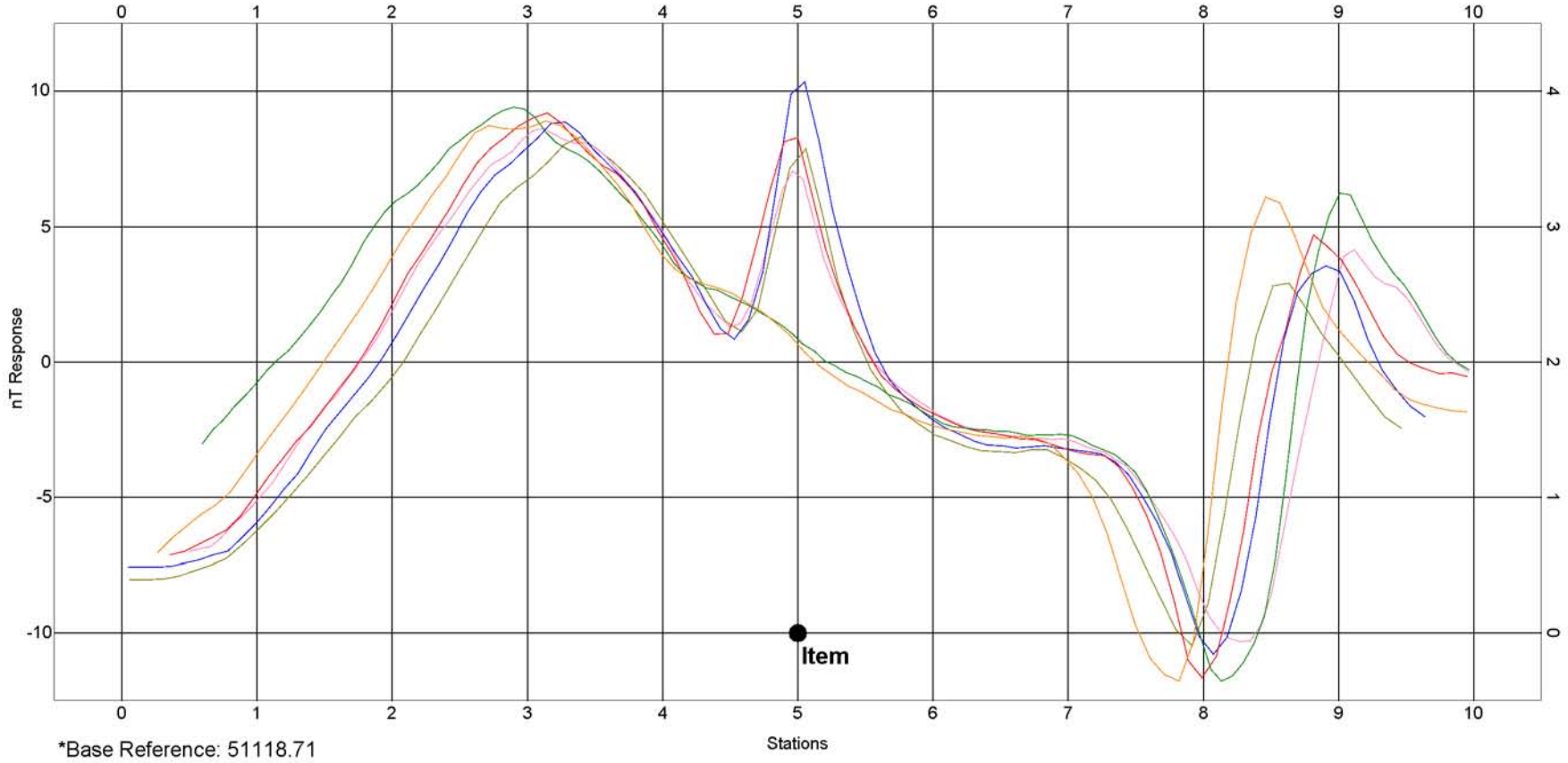

Camp Croft GPO - Sensor Height Test - Total Field Magnetics
51100.000
51095.000
51090.000
51085.000
51080.000
nT
0
2
4
6
8
10
Easting (Locals)
Sensor Height 65 cm
Sensor Height 75 cm
Sensor Height 85 cm

Figure 6



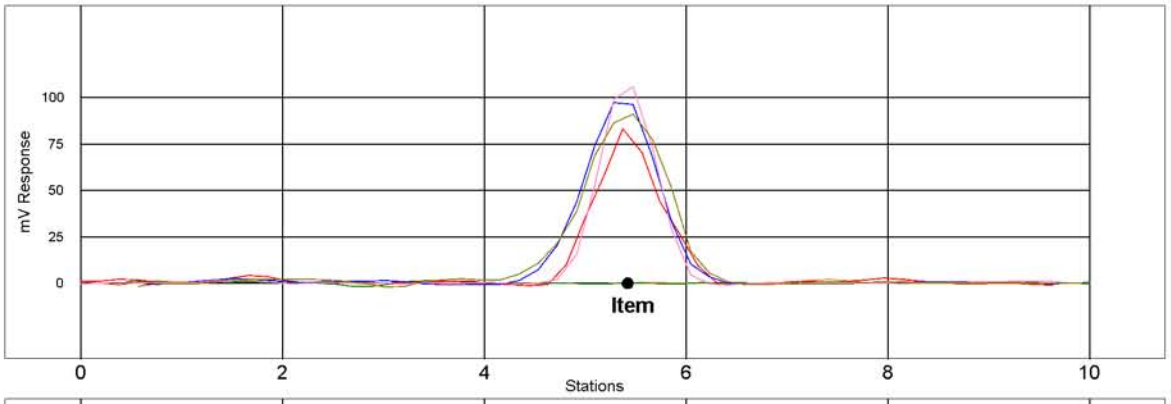
LEGEND

- Line 1 Normal Pace East without Object
- Line 2 Normal Pace West without Object
- Line 3 Normal Pace East with Object
- Line 4 Normal Pace West with Object
- Line 5 Fast Pace East with Object
- Line 6 Slow Pace West with Object

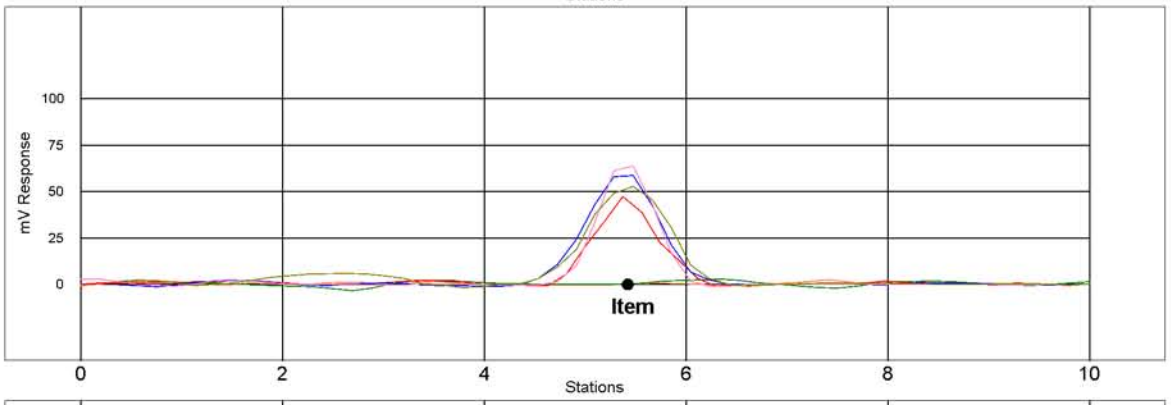
6 Line Test - Total Field Magnetics
Camp Croft GPO
October 23, 2004

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

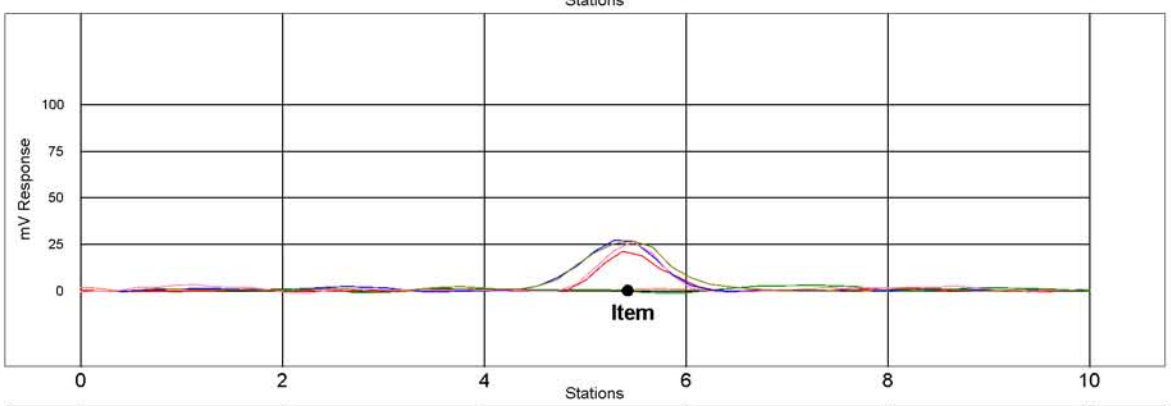
Figure 7



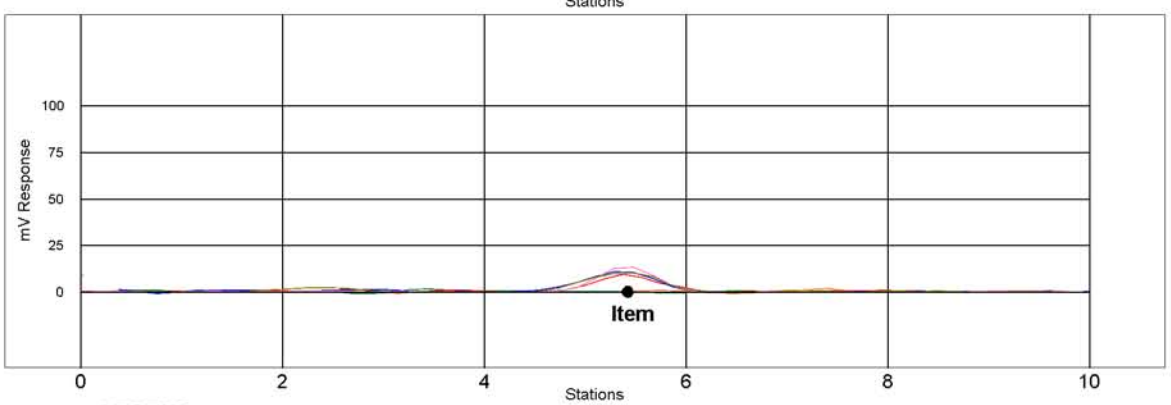
Channel 1
(leveled / lagged)



Channel 2
(leveled / lagged)



Channel 3
(leveled / lagged)



Channel 4
(leveled / lagged)

LEGEND

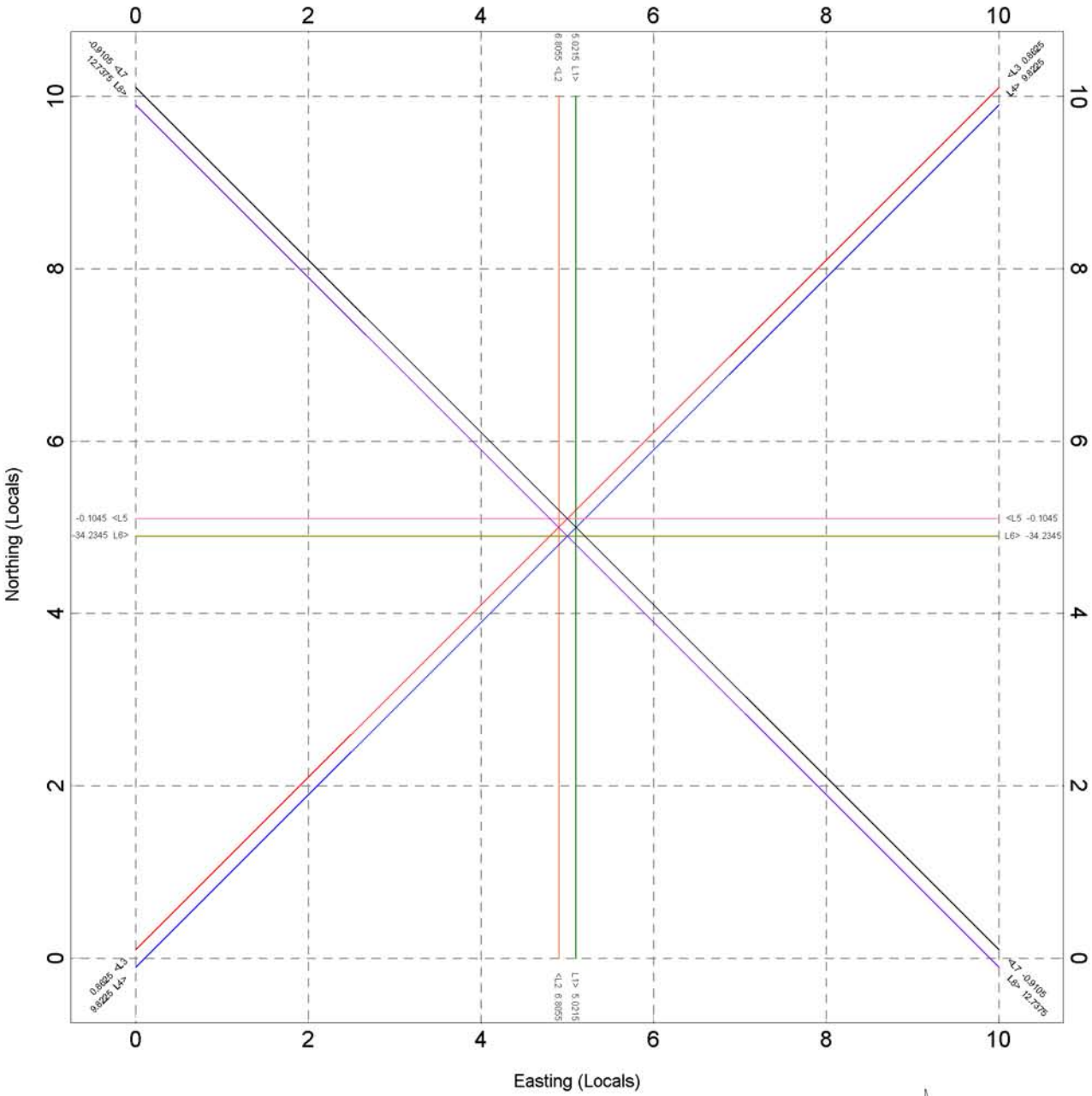
- Line 1 Normal Pace East without Object
- Line 2 Normal Pace West without Object
- Line 3 Normal Pace East with Object
- Line 4 Normal Pace West with Object
- Line 5 Fast Pace East with Object
- Line 6 Slow Pace West with Object

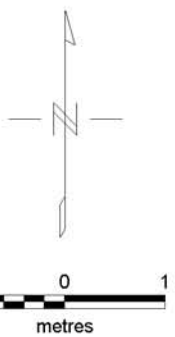
6 Line Test - EM61 MK2
Camp Croft GPO
October 18, 2004

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

Figure 8

Octant Test - Total Field Magnetics - Camp Croft GPO - 10/23/04





* Lines are offset for visible presentation.

Heading Table			
Line	Direction	Correction	
2	0	6.8055	
4	45	9.8225	
6	90	-34.2345	Bad Data
8	135	12.7375	
1	180	5.0215	
3	225	0.8625	
5	270	-0.1045	
7	315	-0.9105	

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

Figure 9

GPO Seeded - Repeat Line 34.5 - Total Field Magnetics - 10/23/04

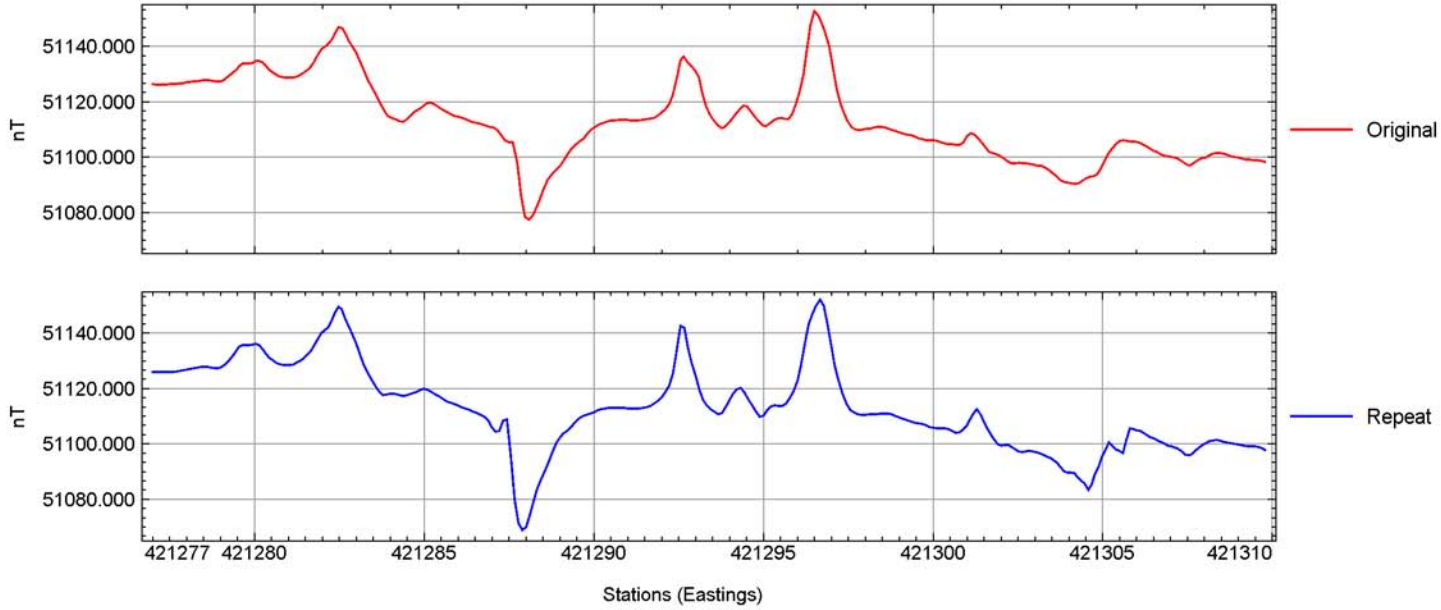


Figure 10

GPO Background - Repeat (Off Grid) - Line 0 - EM61 - Channel 3 - 10/18/04

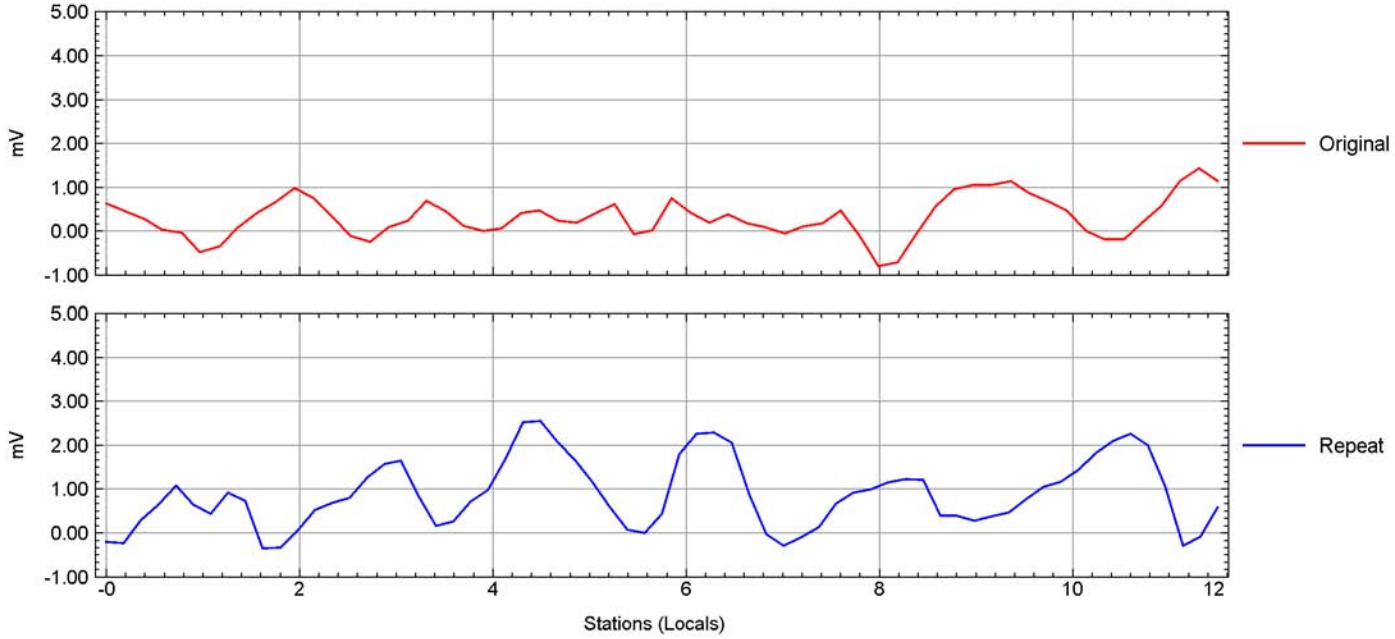


Figure 11a

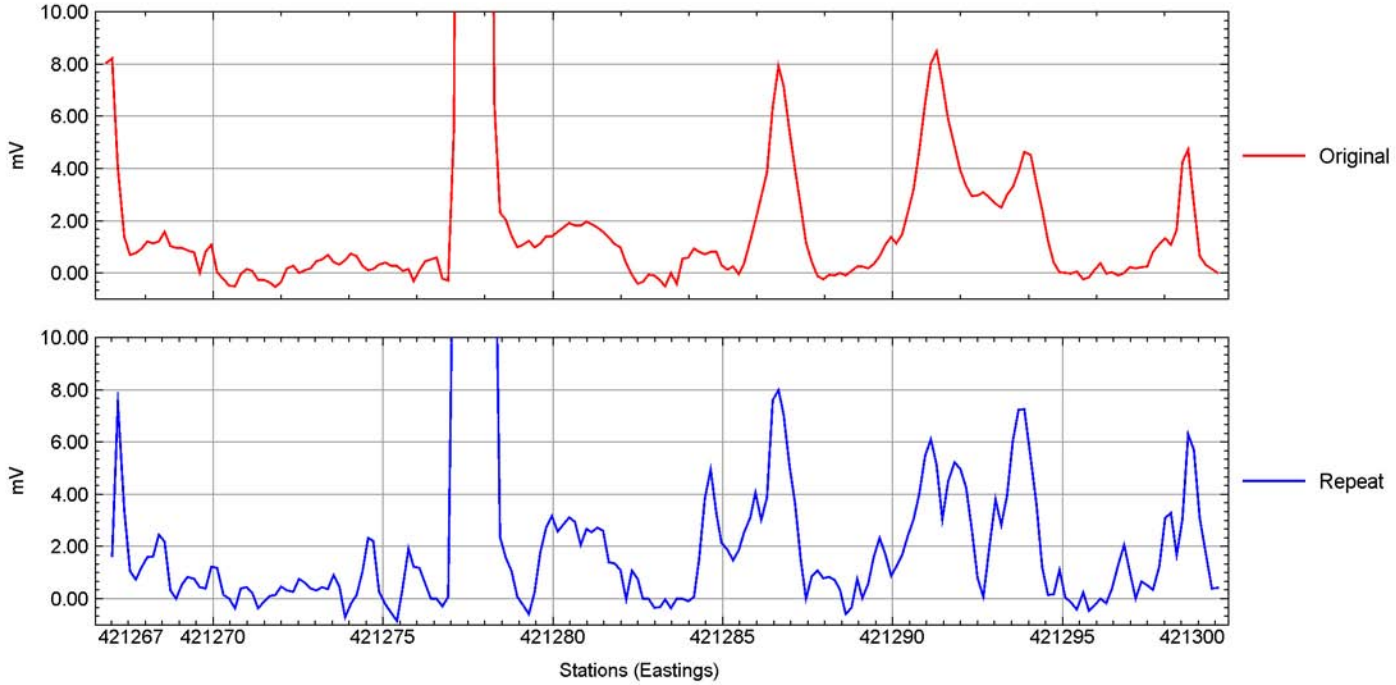

GPO Seeded - Repeat Line 5 - EM61 - Channel 2 - 10/22/04
10.00
8.00
6.00
4.00
2.00
0.00
mV
Original
10.00
8.00
6.00
4.00
2.00
0.00
mV
Repeat
421267
421270
421275
421280
421285
421290
421295
421300
Stations (Eastings)

Figure 11b

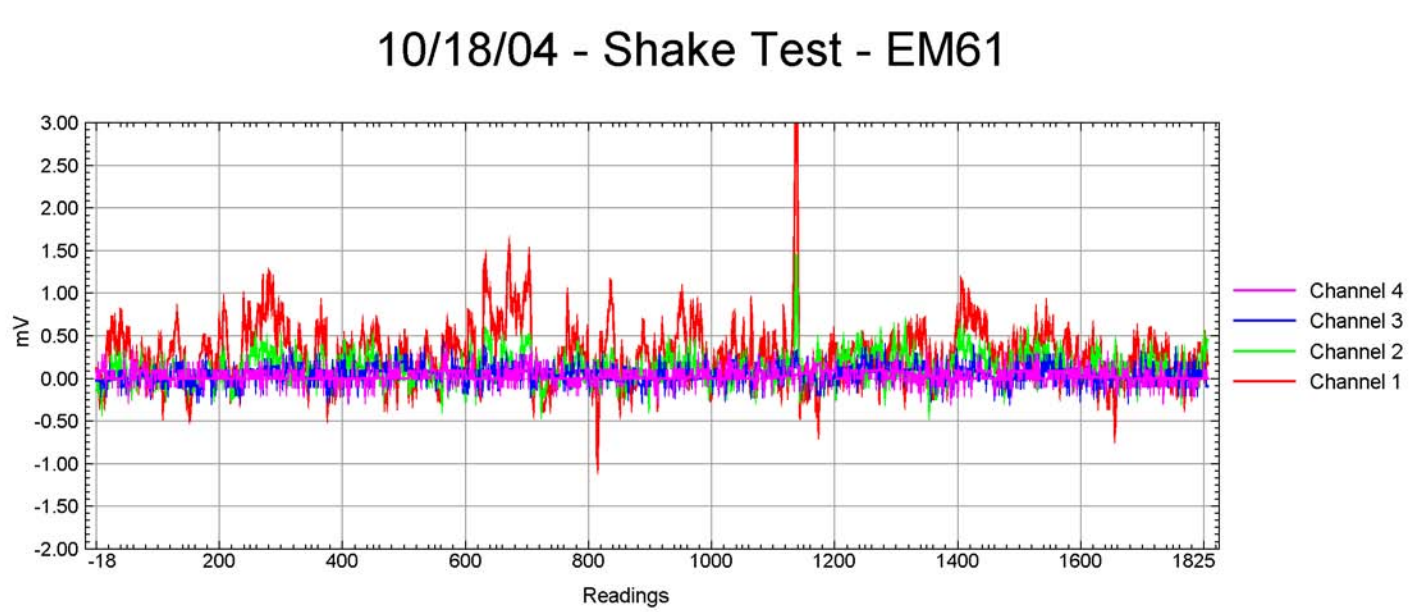

10/18/04 - Shake Test - EM61
3.00
2.50
2.00
1.50
1.00
0.50
0.00
-0.50
-1.00
-1.50
-2.00
mV
-18
200
400
600
800
1000
1200
1400
1600
1825
Readings
Channel 4
Channel 3
Channel 2
Channel 1

Figure 12

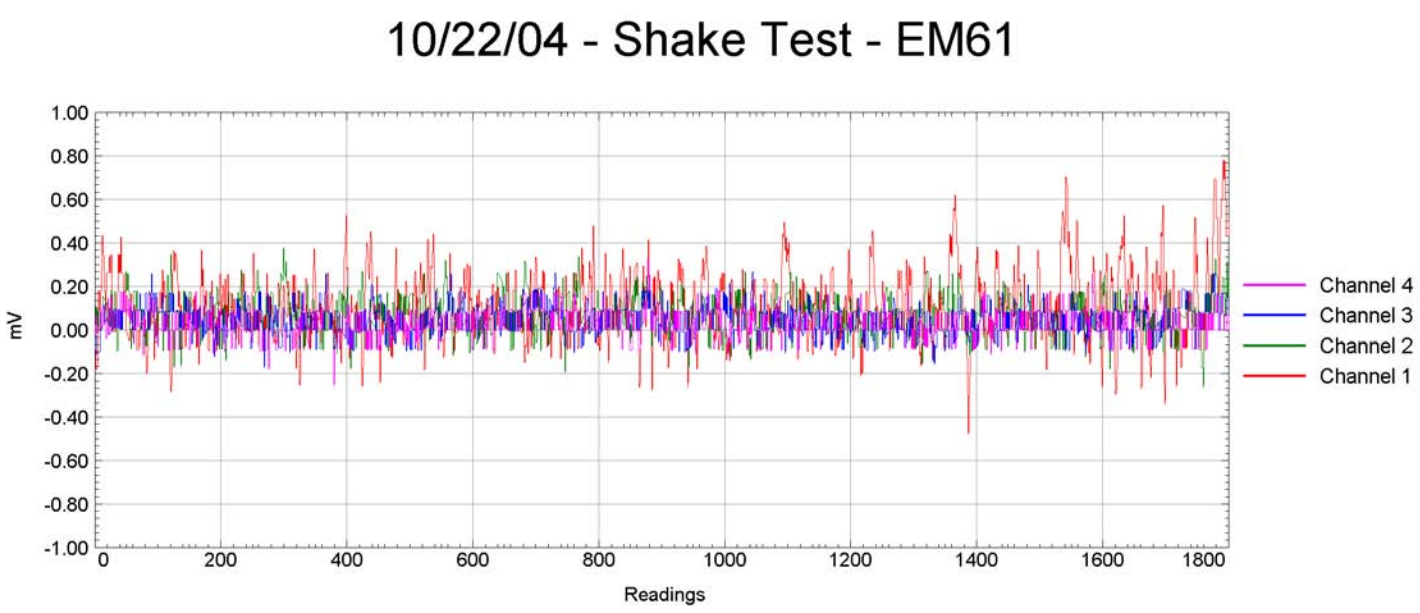

10/22/04 - Shake Test - EM61
1.00
0.80
0.60
0.40
0.20
0.00
-0.20
-0.40
-0.60
-0.80
-1.00
mV
0
200
400
600
800
1000
1200
1400
1600
1800
Readings
Channel 4
Channel 3
Channel 2
Channel 1

Figure 13

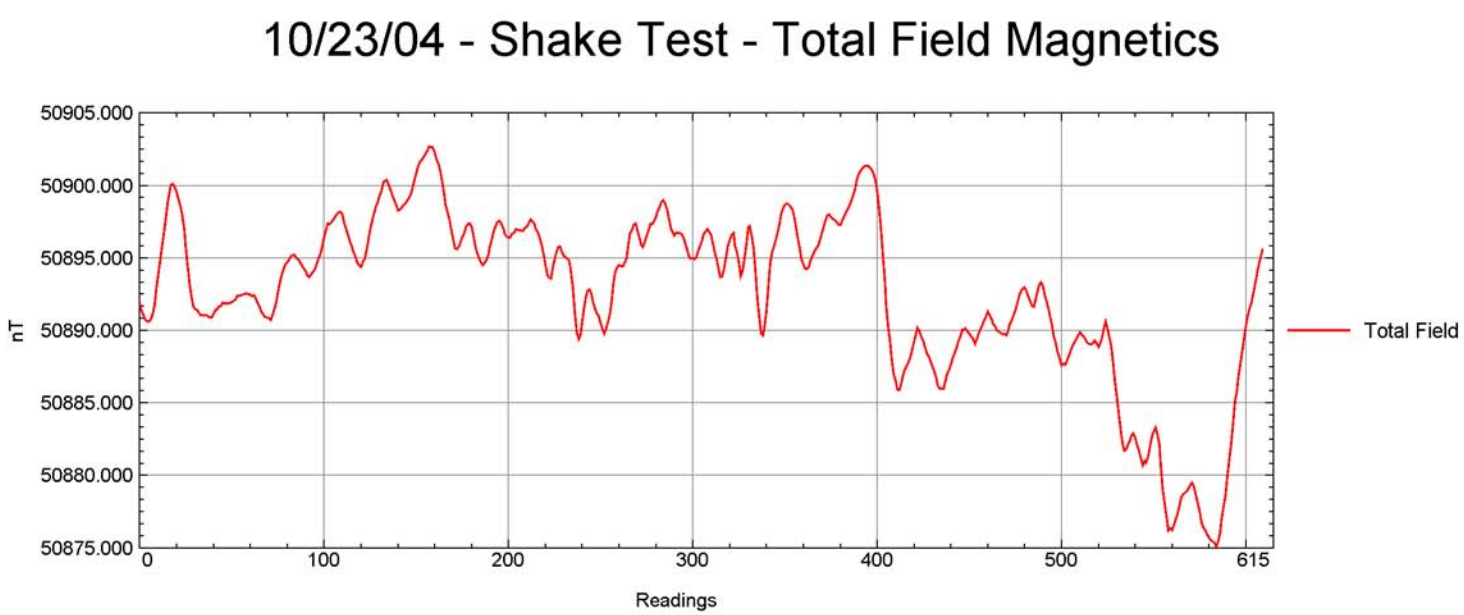

10/23/04 - Shake Test - Total Field Magnetics
50905.000
50900.000
50895.000
50890.000
50885.000
50880.000
50875.000
nT
0
100
200
300
400
500
615
Readings
Total Field

Figure 14

421265 421270 421275 421280 421285 421290 421295 421300 421305

3852050 3852045 3852040 3852035 3852030 3852025 3852020 3852015 3852010 3852005

mV

Legend

Area of Investigation

Corner Stake

Scale 1:200

2.5 0 2.5 5 7.5

Figure 15a

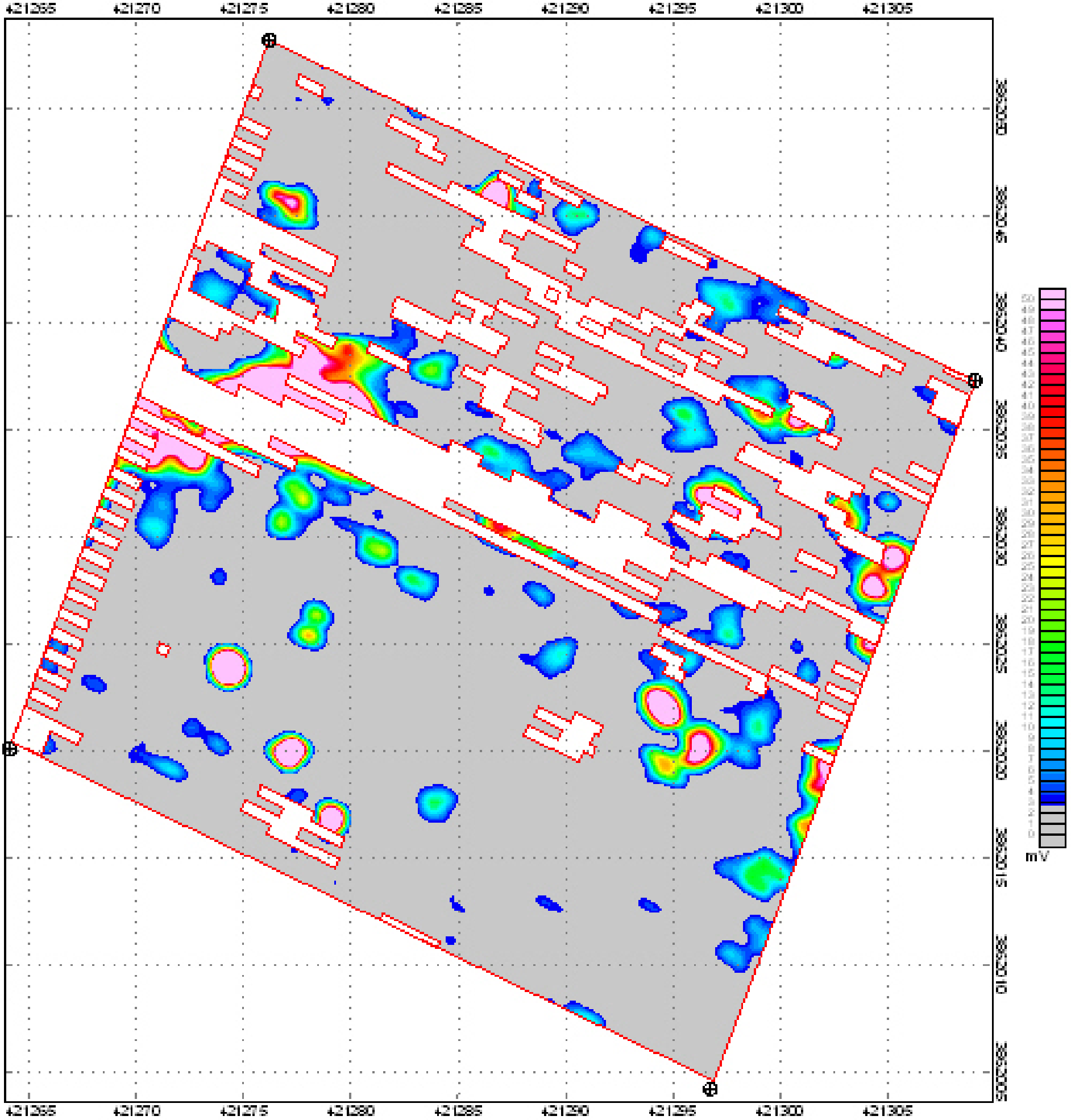
NAEVA GEOPHYSICS INC.

Subsurface Geophysical Surveys

Zapata Engineering

EM61 MK2 Channel 1
GPO Background Survey
Camp Croft, South Carolina

Date of Survey: October 19, 2004



Scale 1:200

2.5 0 2.5 5 7.5

Legend

Area of Investigation

Corner Stake

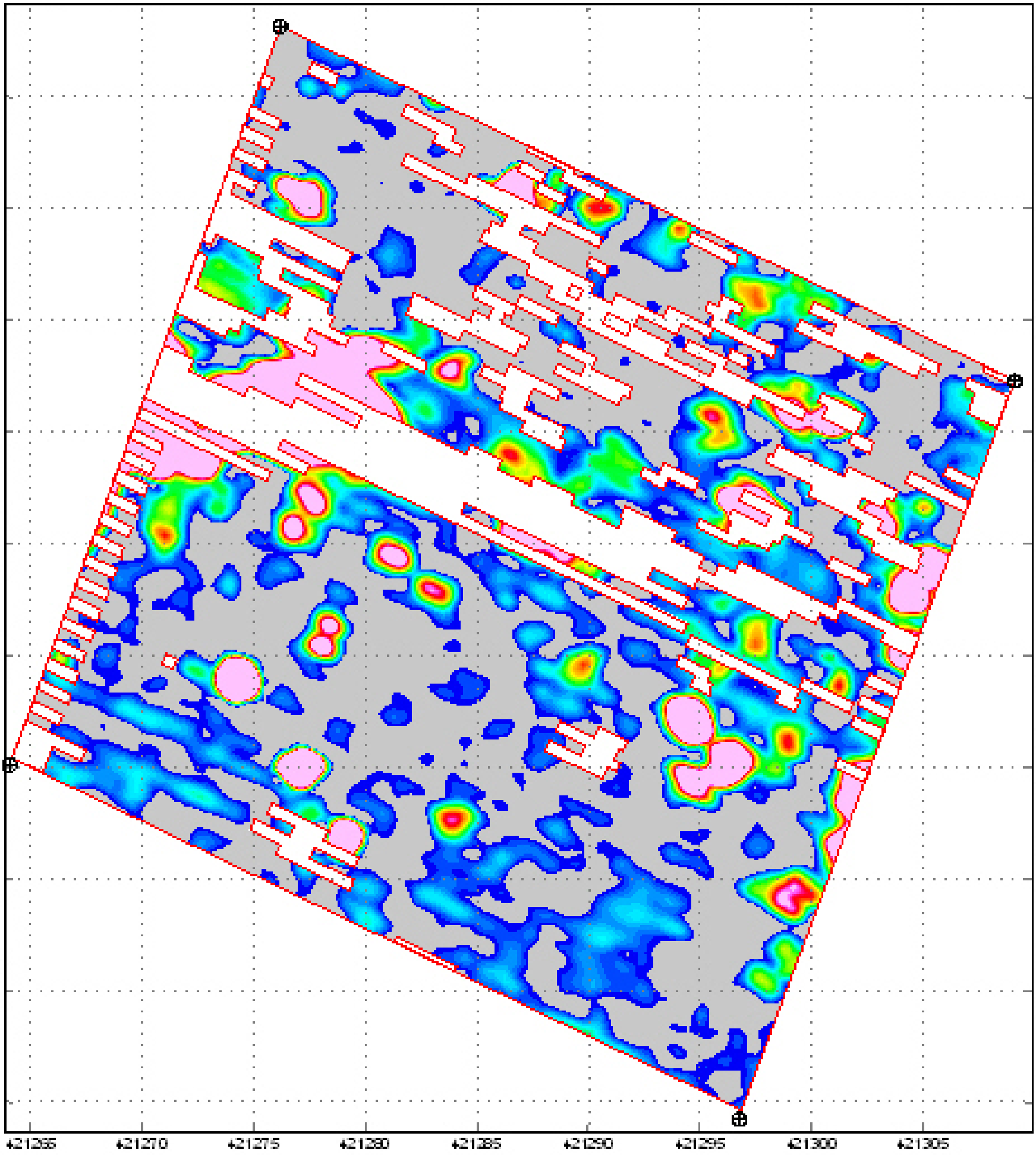
Figure 15b

Zapata Engineering

EM61 MK2 Channel 2
GPO Background Survey
Camp Croft, South Carolina

Date of Survey: October 19, 2004

NAEVA GEOPHYSICS INC.
Subsurface Geophysical Surveys



Scale 1:200

25 0 25 5 7.5

Legend

Area of Investigation

Corner Stake

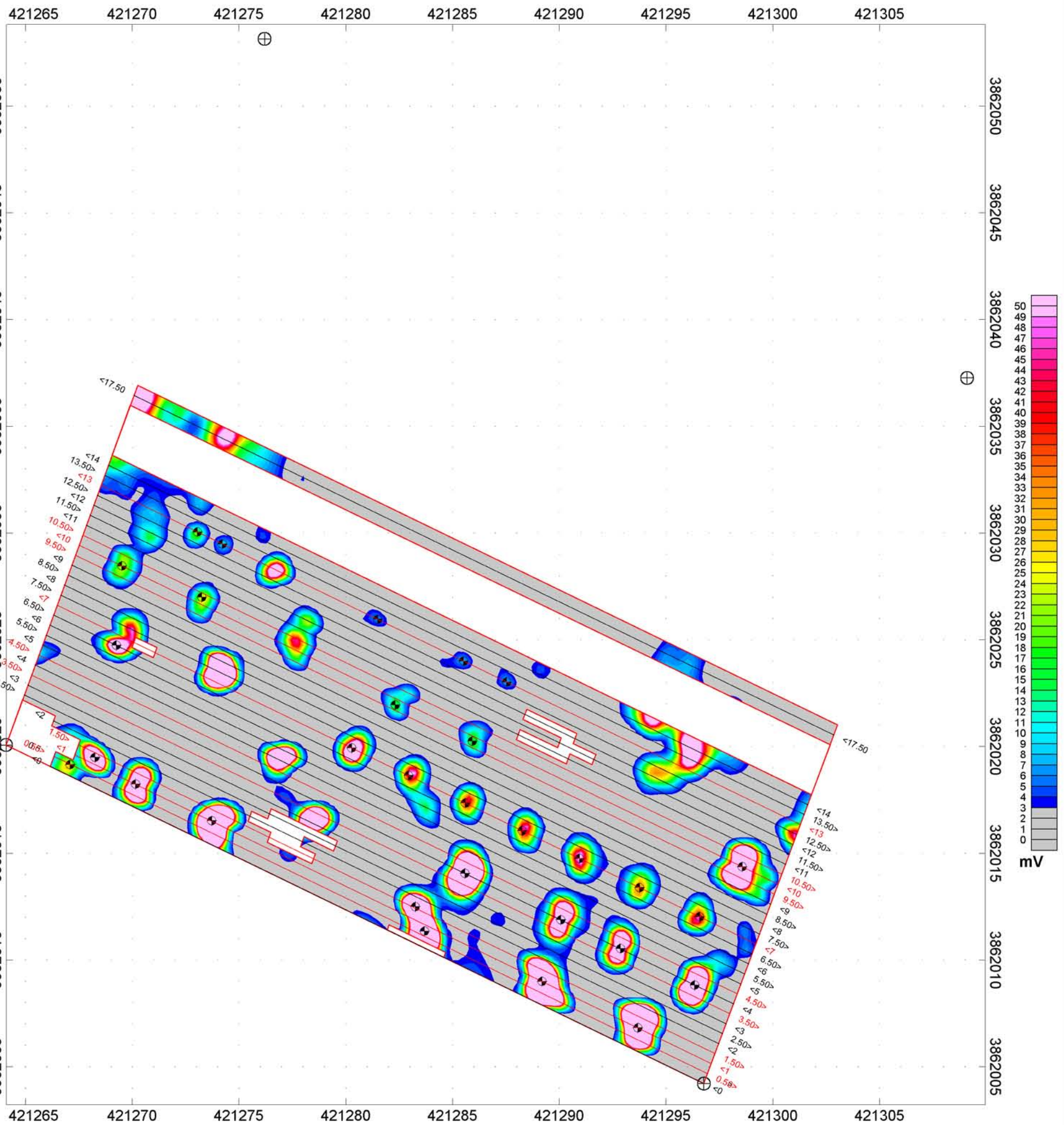
Figure 15c

Zapata Engineering

EM61 MK2 SUM (Ch1, Ch2 & Ch3)
GPO Background Survey
Camp Croft, South Carolina

Date of Survey: October 19, 2004

NAEVA GEOPHYSICS INC.
Subsurface Geophysical Surveys



Scale 1:200

2.5 0 2.5 5 7.5

metres

NAD83 / UTM zone 17N

Legend

- Area of Investigation
- Line with Profile over Seed Items
- Line Path
- Seed Item
- Grid Corner

Figure 16A

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

Zapata Engineering

EM61 MK2 Channel 2
Surface Seed Item Test Layout Map
Camp Croft, South Carolina

Date of Survey: October 19, 2004

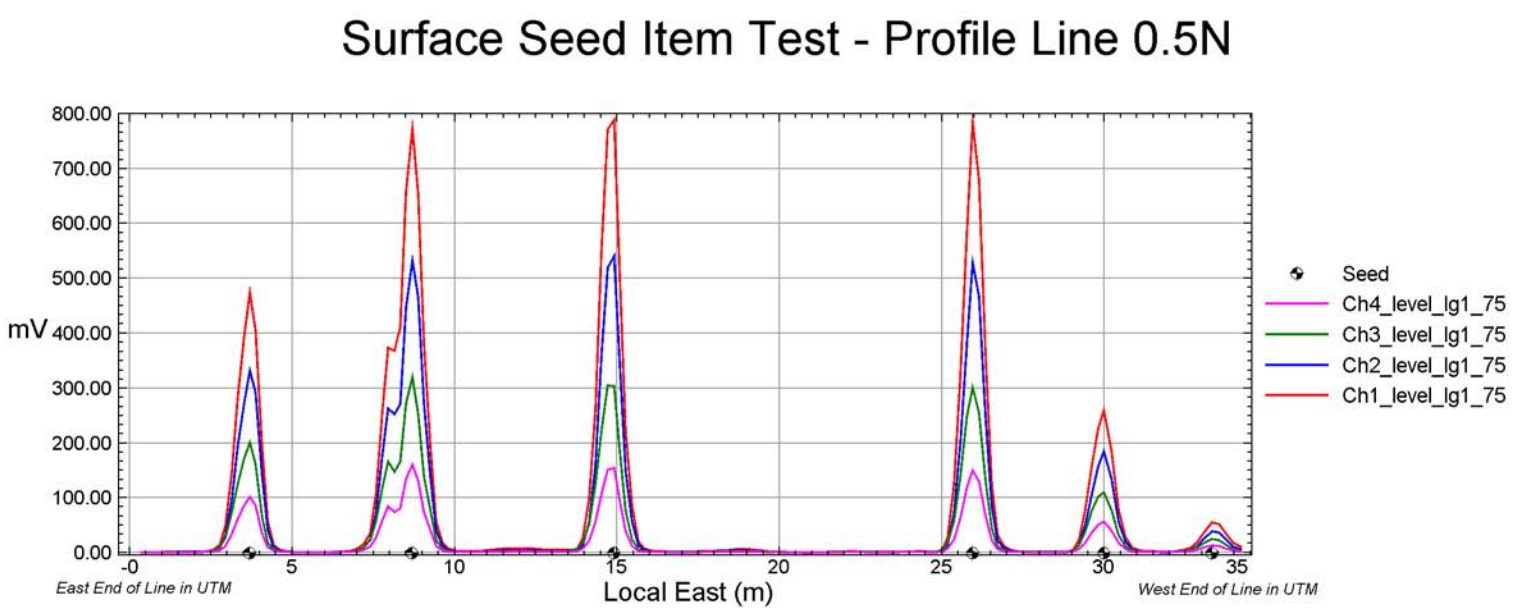


Figure 16b

database: DS Experiment Seeded Items on Surface.gdb line/group: L0.50

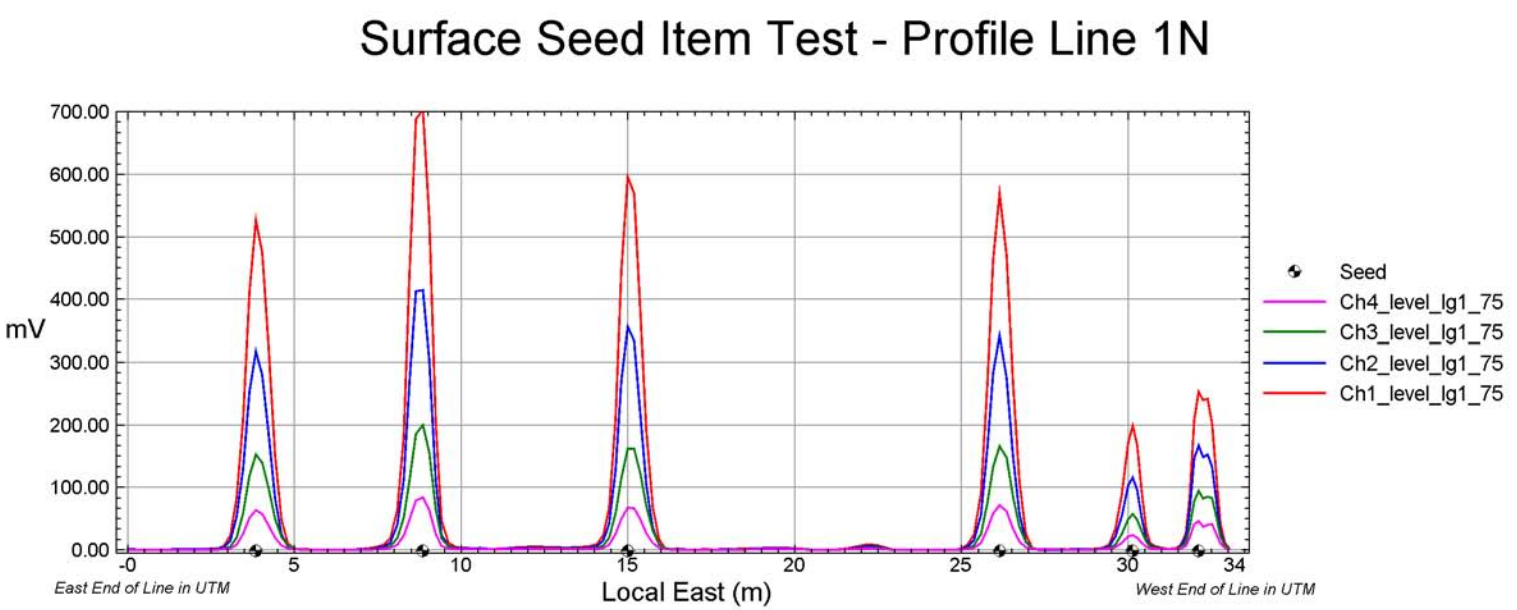


Figure 16c

database: DS Experiment Seeded Items on Surface.gdb line/group: L1

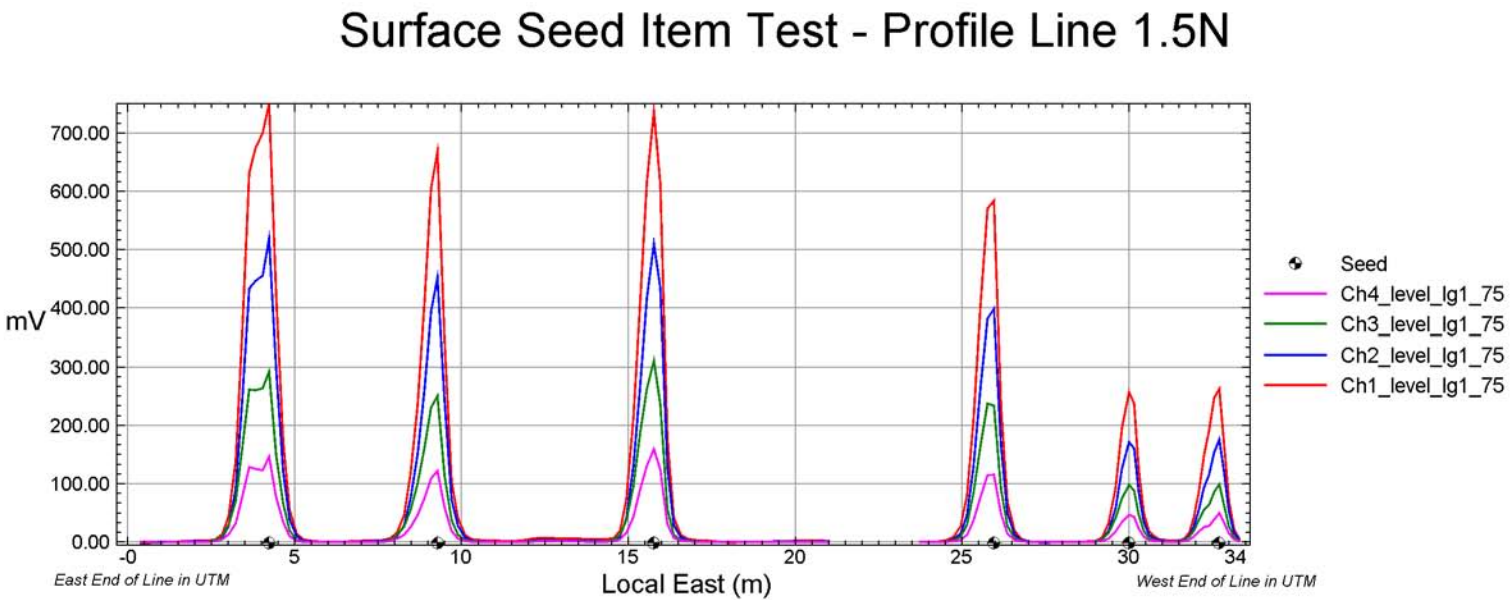


Figure 16d

database: DS Experiment Seeded Items on Surface.gdb line/group: L1.50

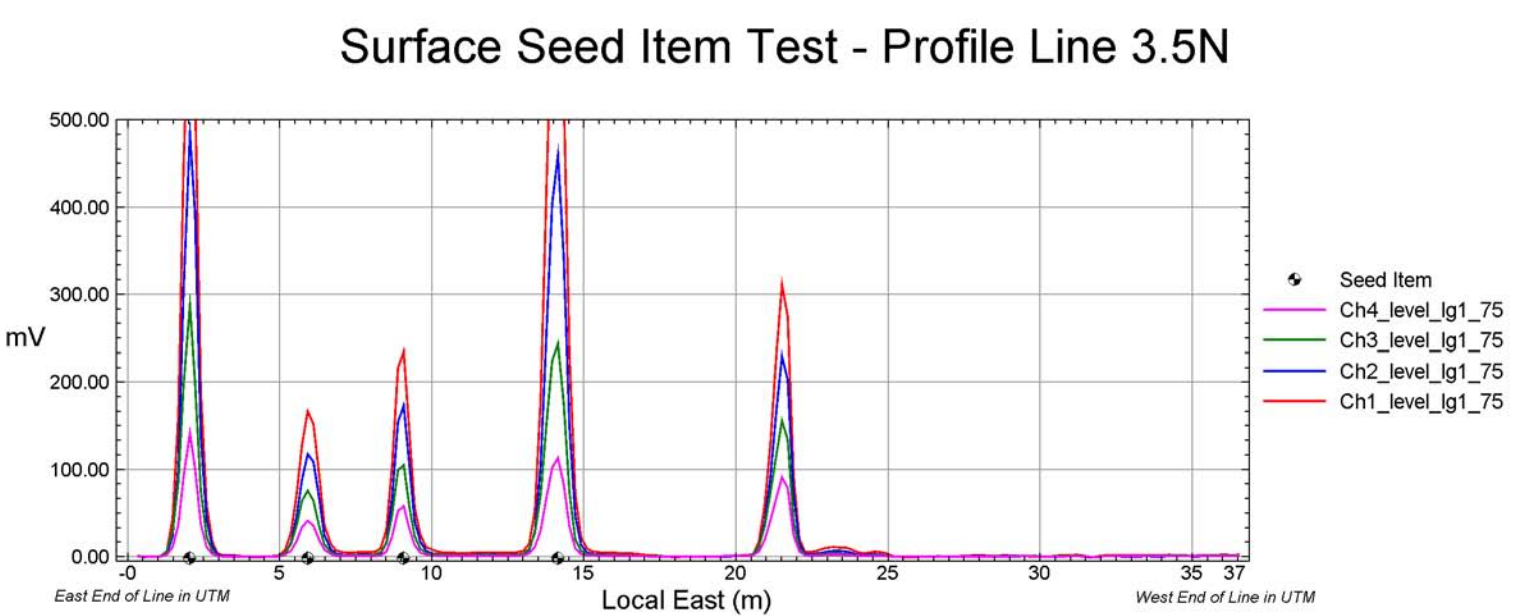


Figure 16e

database: DS Experiment Seeded Items on Surface.gdb line/group: L3.50

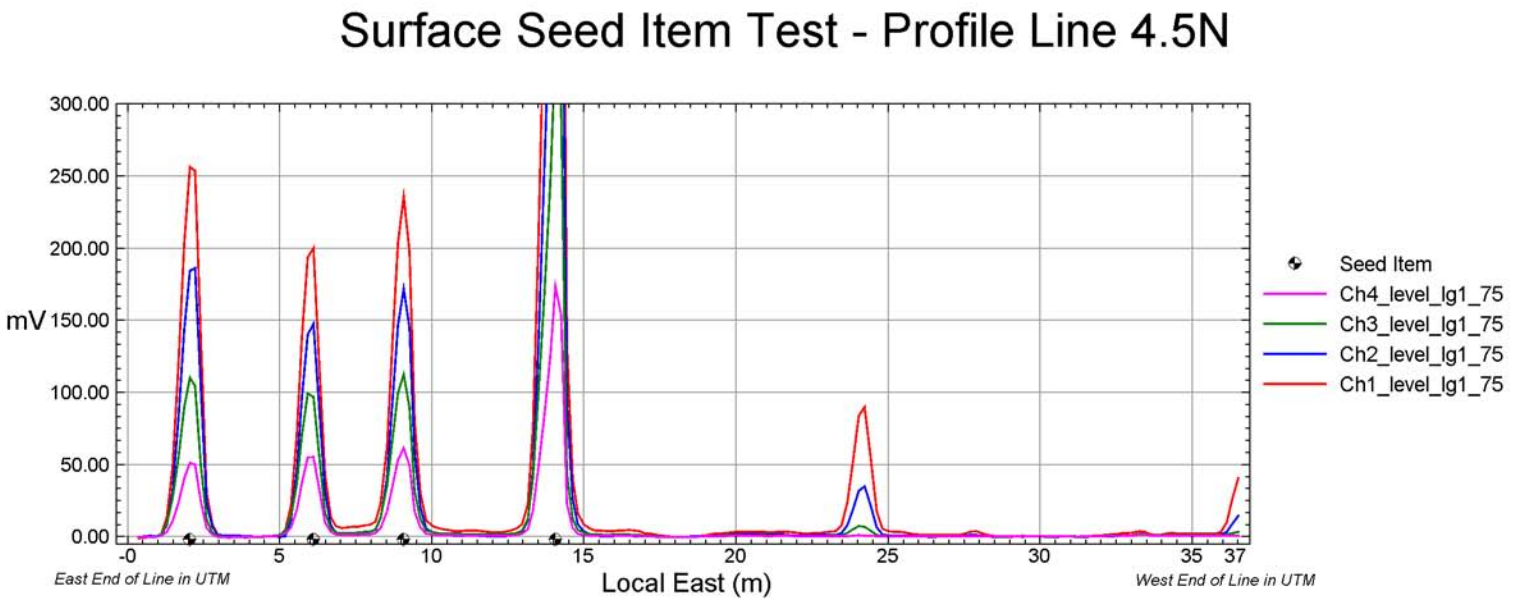


Figure 16f

database: DS Experiment Seeded Items on Surface.gdb line/group: L4.50

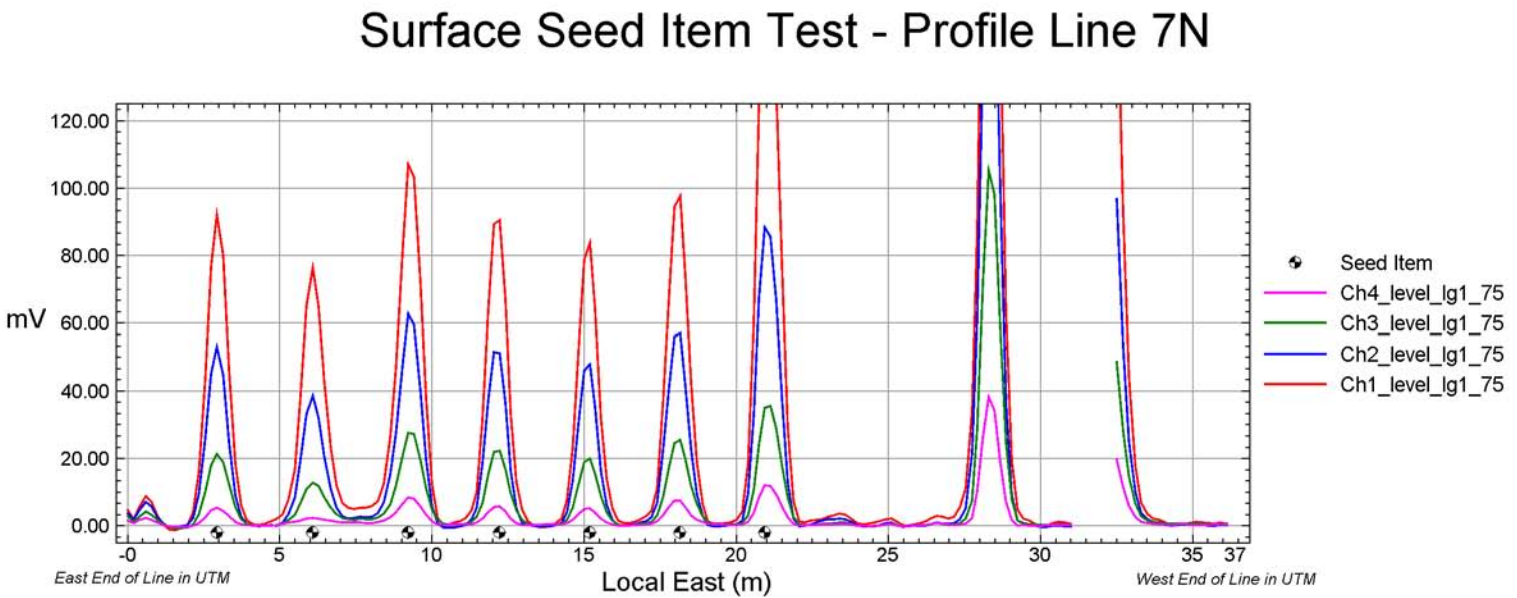


Figure 16g

database: DS Experiment Seeded Items on Surface.gdb line/group: L7

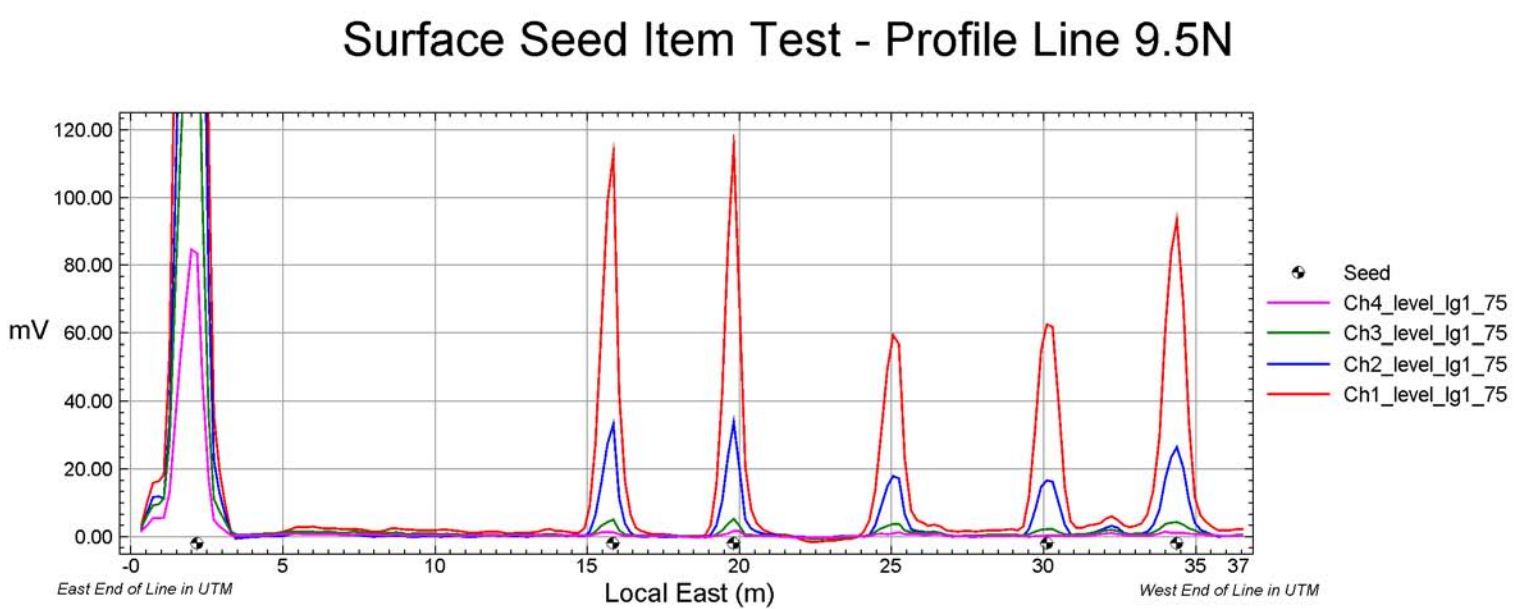


Figure 16h

database: DS Experiment Seeded Items on Surface.gdb line/group: L9.50

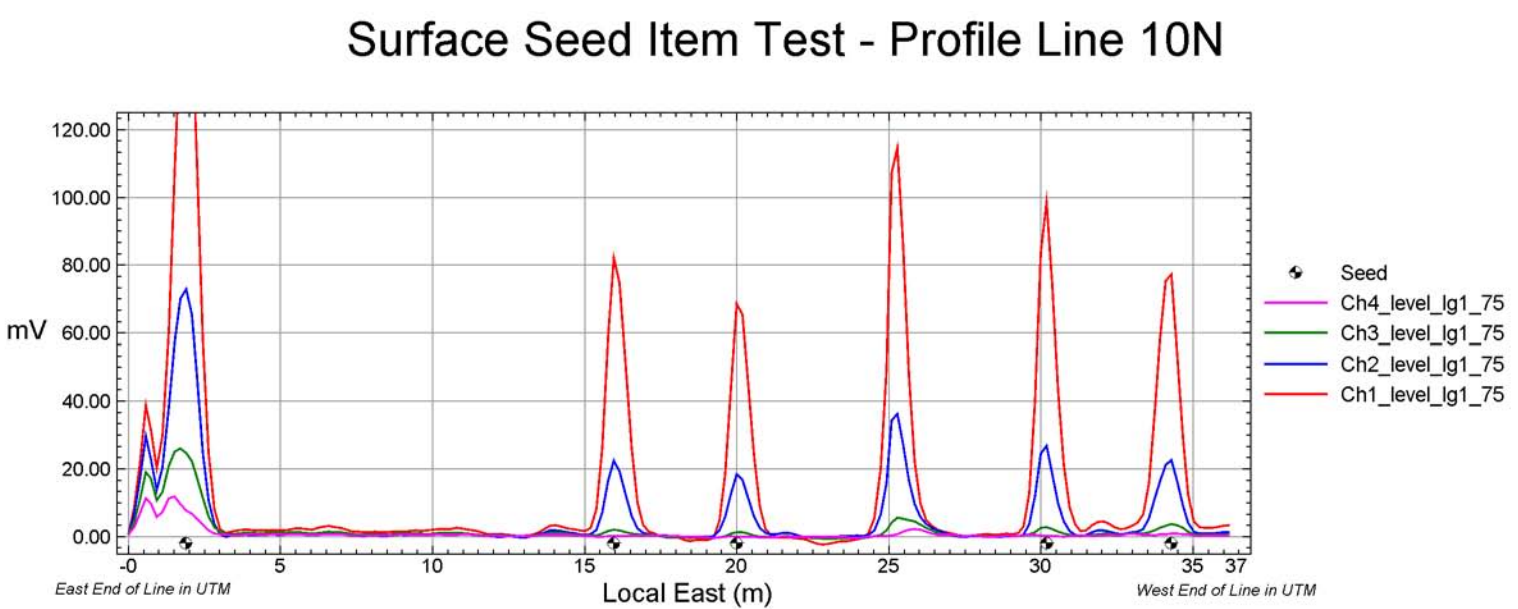


Figure 16i

database: DS Experiment Seeded Items on Surface.gdb line/group: L10

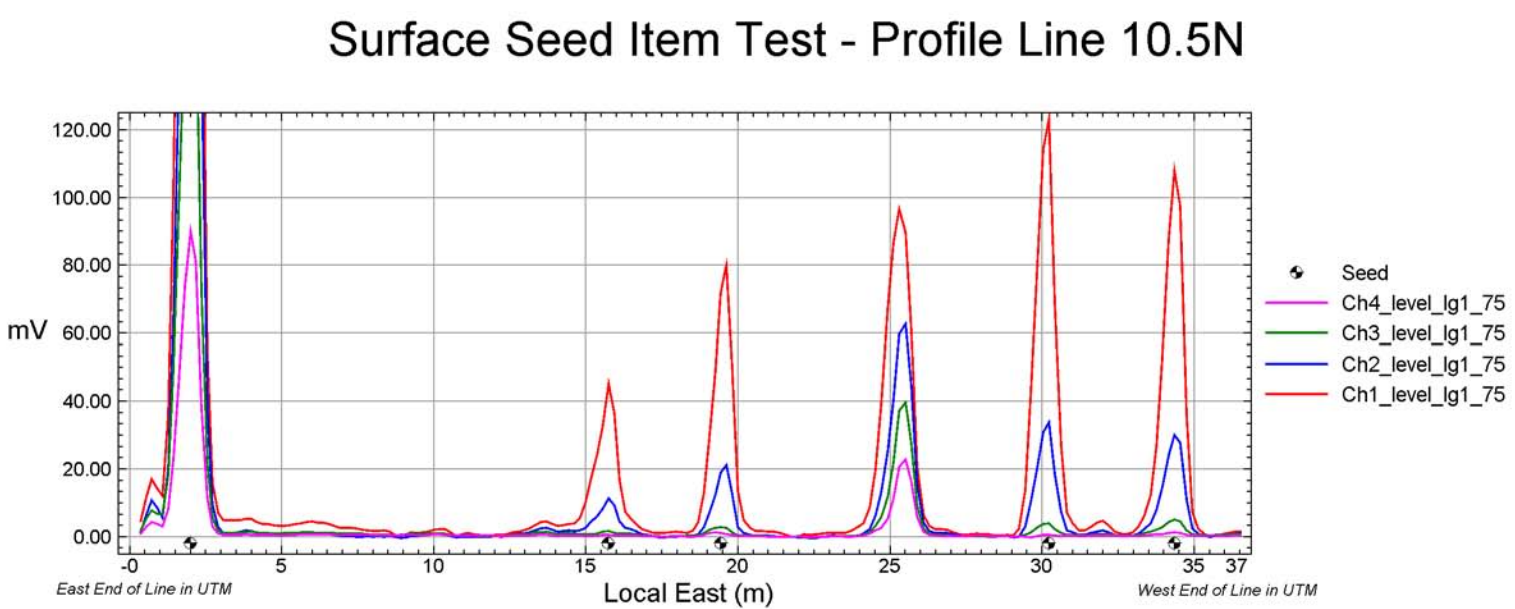


Figure 16j

database: DS Experiment Seeded Items on Surface.gdb line/group: L10.50

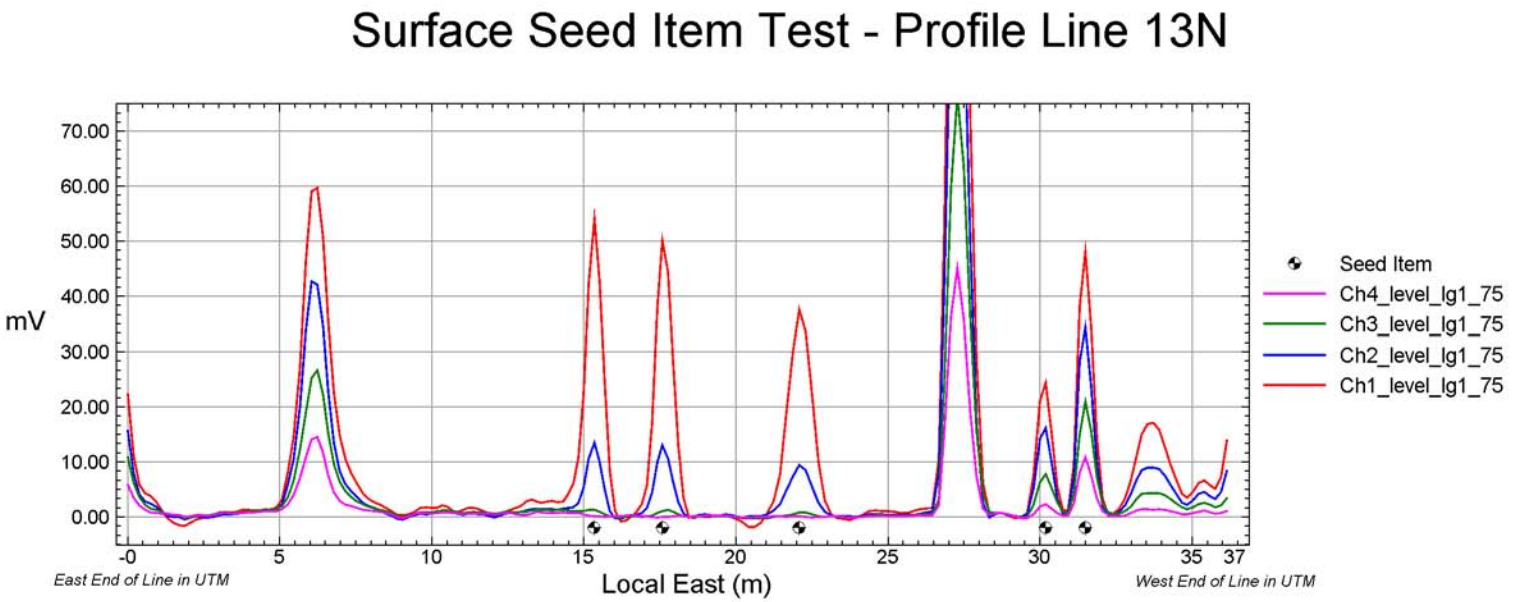
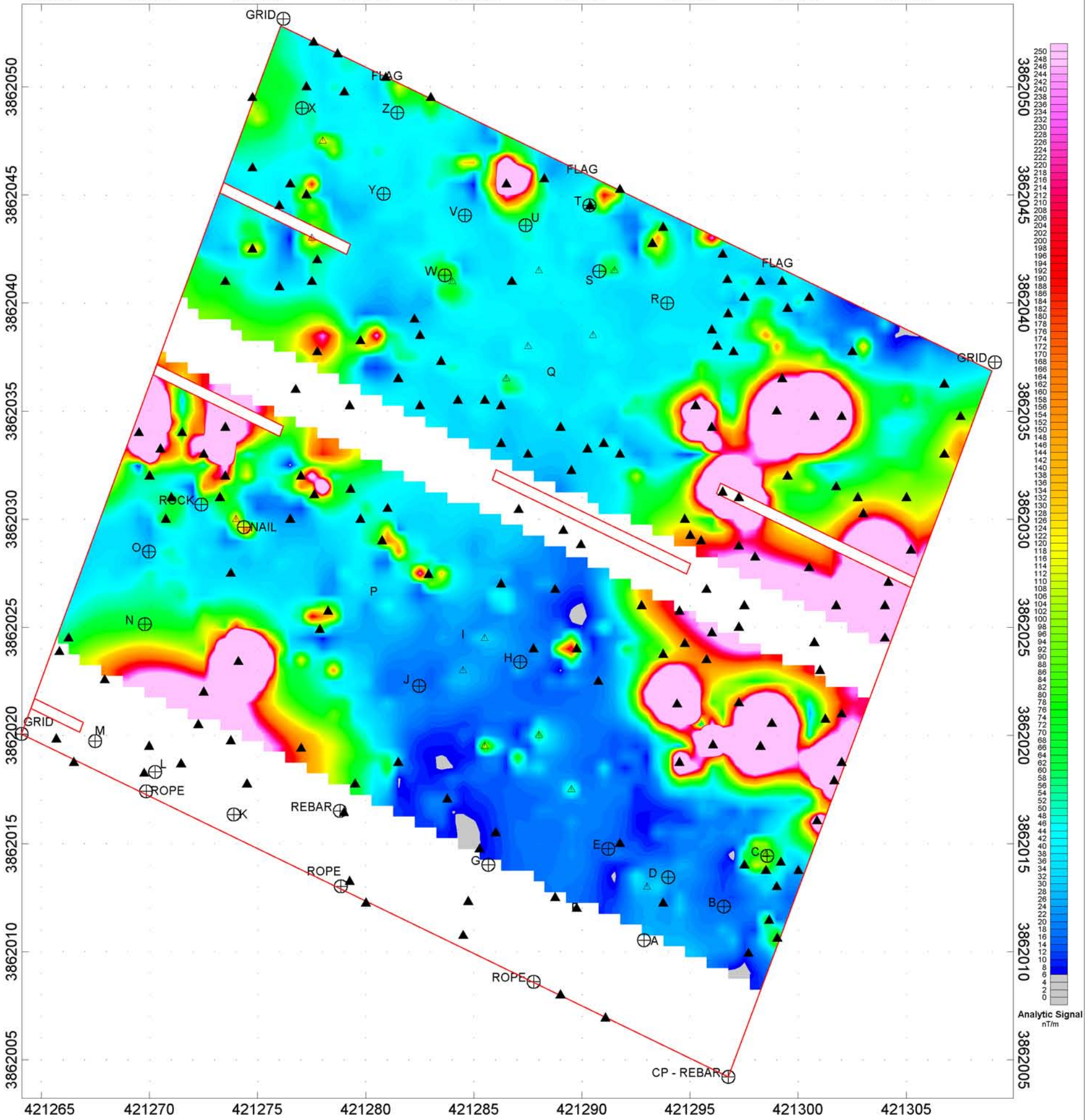


Figure 16k

database: DS Experiment Seeded Items on Surface.gdb line/group: L13



Legend

Area of Investigation

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

Background Targets from EM61 Channel 2

A Item Seeded Item
(Seeded Items & Miscellaneous Surveyed Items)

Scale 1:200

2.5 0 2.5 5 7.5

metres

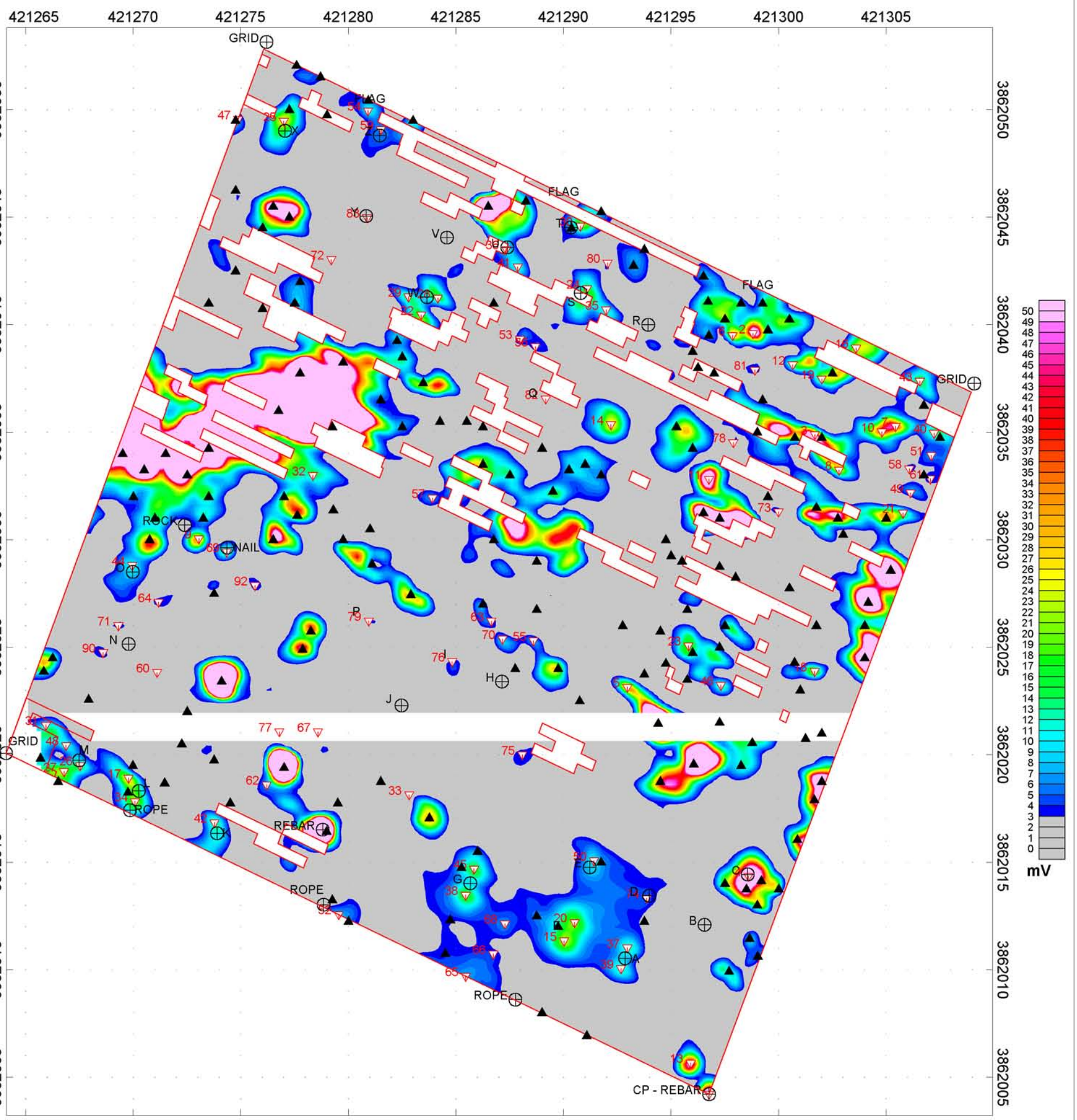
NAD83 / UTM zone 17N

Figure 17

Zapata Engineering

Analytic Signal from Vertical Gradient (8 Inch Sensor Height)
GPO Seeded Survey
Camp Croft, South Carolina

Date of Survey: November 22, 2004



Legend

Area of Investigation

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

Background Targets from Channel 2

A Item — Seeded Item
(Seeded Items & Miscellaneous Surveyed Items)

Scale 1:200

2.5 0 2.5 5 7.5

metres

NAD83 / UTM zone 17N

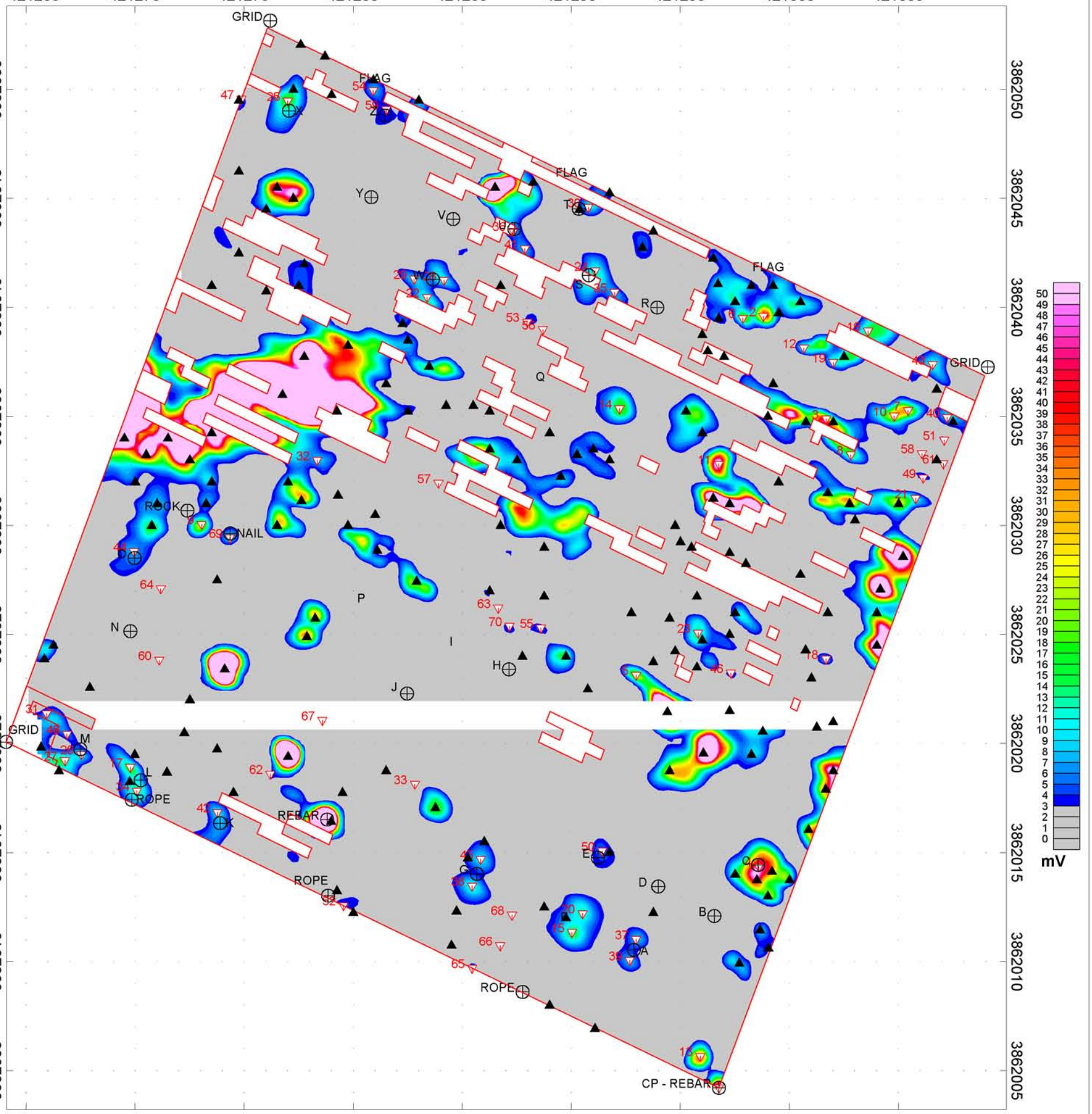
Figure 18a

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

Zapata Engineering

EM61 MK2 Channel 1
GPO Seeded Survey
Camp Croft, South Carolina

Date of Survey: October 21, 2004



Legend

- Area of Investigation
- Selected Target (See Target Pick List For Response and Location)
- Background Targets from Channel 2
- A Item — Seeded Item (Seeded Items & Miscellaneous Surveyed Items)

Scale 1:200

2.5 0 2.5 5 7.5

metres

NAD83 / UTM zone 17N

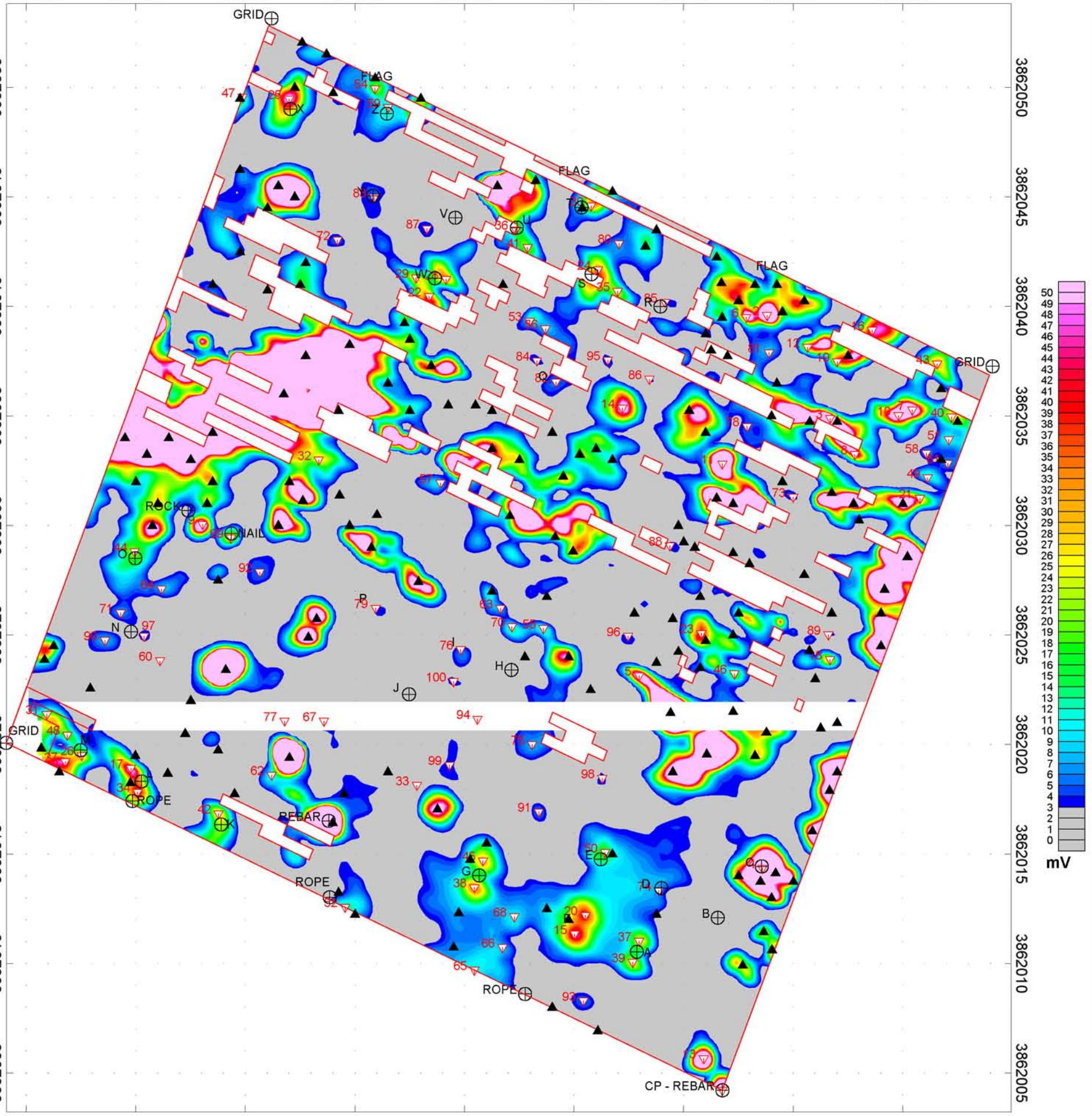
Figure 18b

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

Zapata Engineering

EM61 MK2 Channel 2
GPO Seeded Survey
Camp Croft, South Carolina

Date of Survey: October 21, 2004



Legend

Area of Investigation

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

Background Targets from Channel 2

A Item — Seeded Item
(Seeded Items & Miscellaneous Surveyed Items)

Scale 1:200

2.5 0 2.5 5 7.5

metres

NAD83 / UTM zone 17N

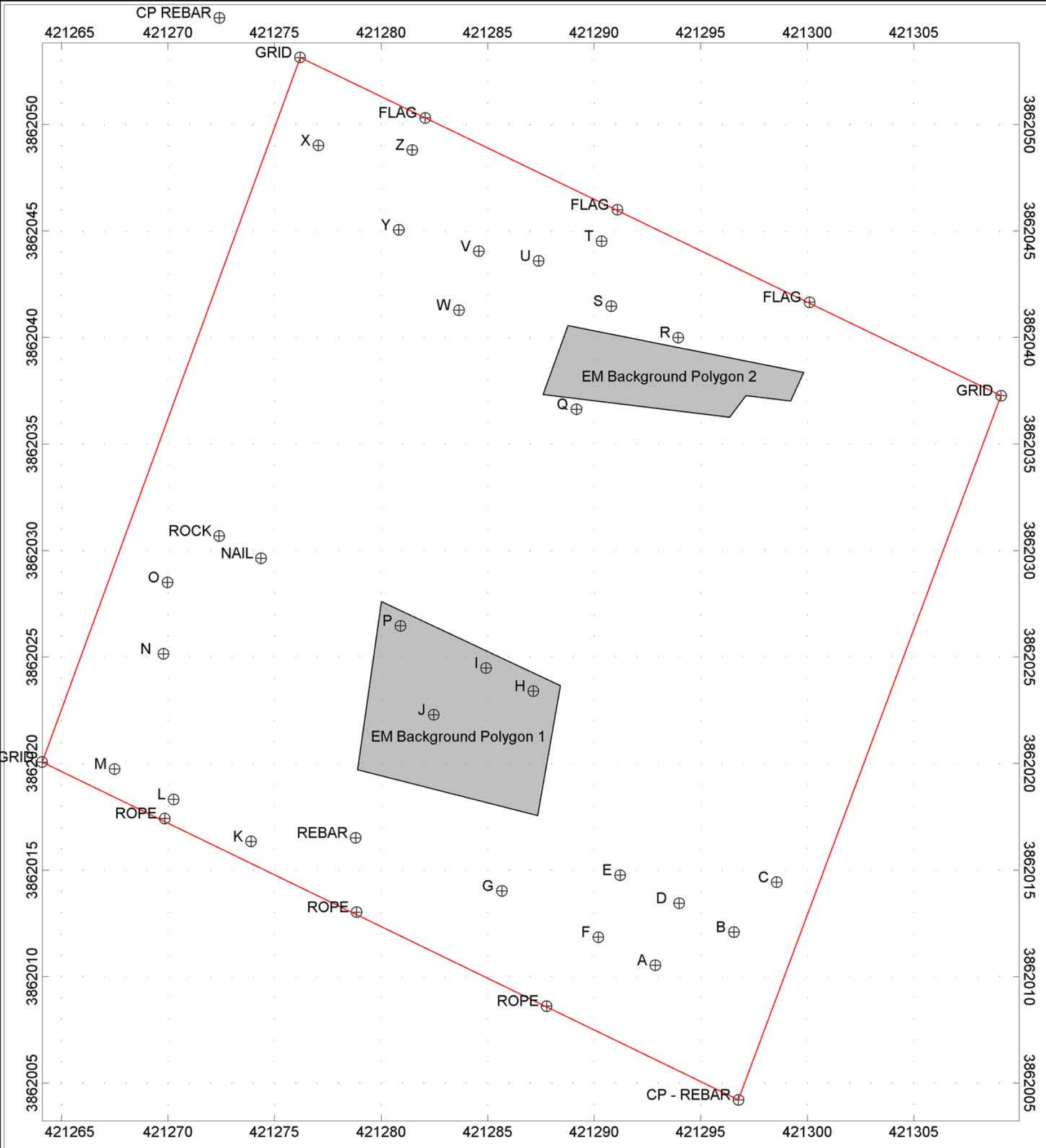
Figure 18c

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

Zapata Engineering

EM61 MK2 Sum Channels 1, 2 & 3
GPO Seeded Survey
Camp Croft, South Carolina

Date of Survey: October 21, 2004



Legend

Area of Investigation

Selected Area fro Backgroudn Response

A Item
Seeded Item
(Seeded Items & Miscellaneous Surveyed Items)

Scale 1:200

2.5 0 2.5 5 7.5

metres

NAD83 / UTM zone 17N

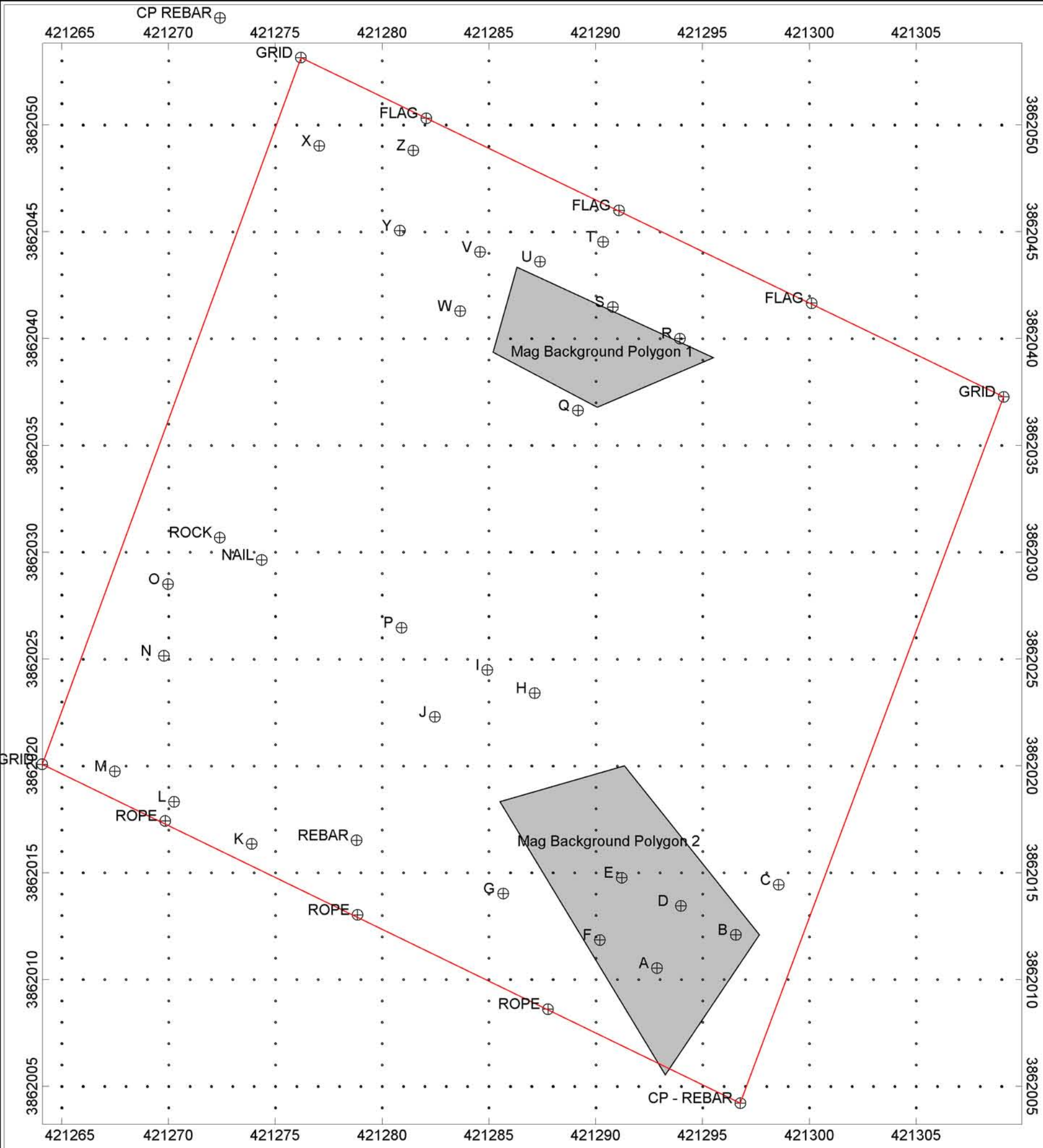
Figure 19a

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

Zapata Engineering

EM61 MK2 Areas Selected for Estimating Background Response
GPO Seeded and Background Survey
Camp Croft, South Carolina

Date of Survey: October 2004



Scale 1:200

2.5 0 2.5 5 7.5

metres

NAD83 / UTM zone 17N

Legend

Area of Investigation

Selected Area fro Backgroudn Response

A Item — Seeded Item
(Seeded Items & Miscellaneous Surveyed Items)

Figure 19b

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

Zapata Engineering

Magnetics Areas Selected for Estimating Background Response
GPO Seeded Survey
Camp Croft, South Carolina

Date of Survey: October 2004

Camp Croft GPO - Yield Curve - Channel 1

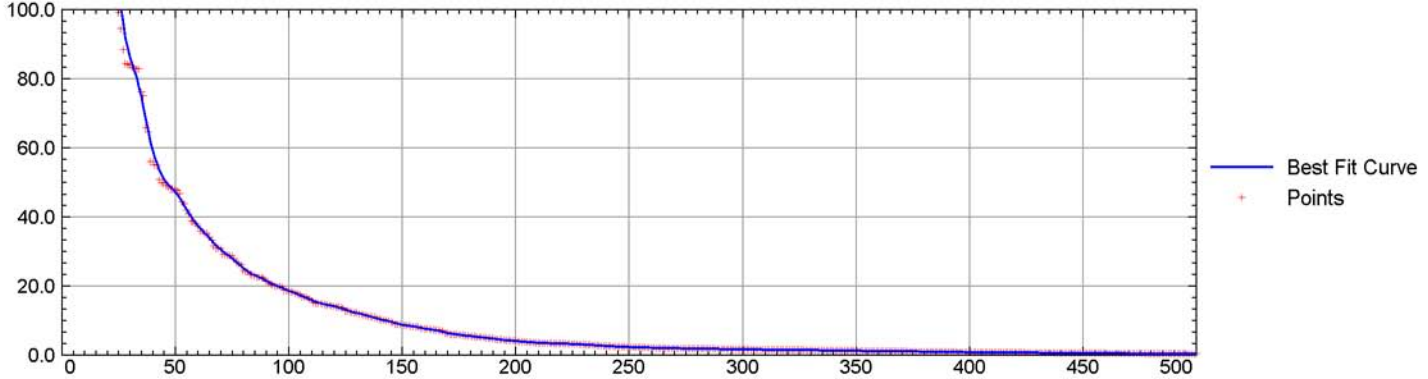


Figure 20a

database: GPO Seeded Yield Curves.gdb line/group: Targets_Ch1

2004/11/08

Camp Croft GPO - Yield Curve - Channel 2

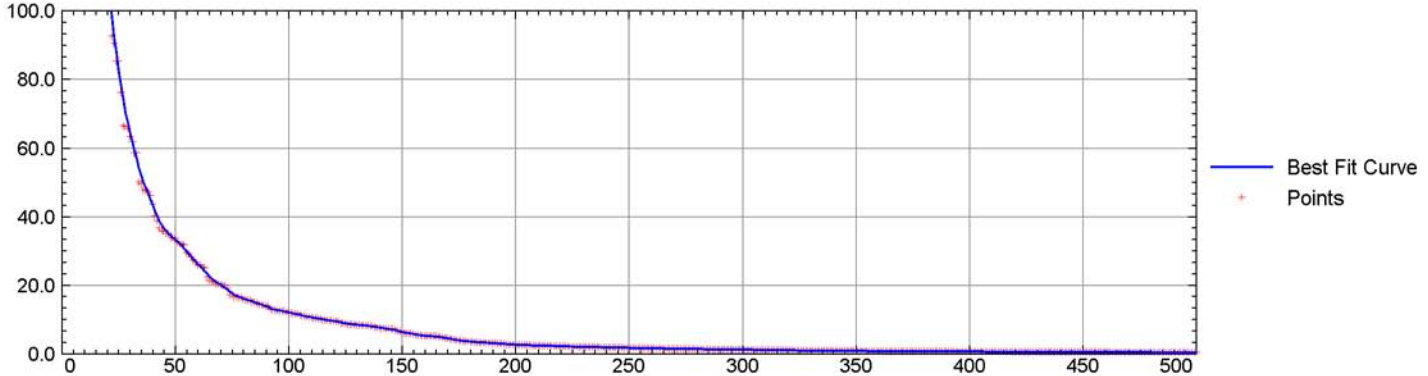


Figure 20b

database: GPO Seeded Yield Curves.gdb line/group: Targets_Ch2

2004/11/08

Camp Croft GPO - Yield Curve - Channel 3

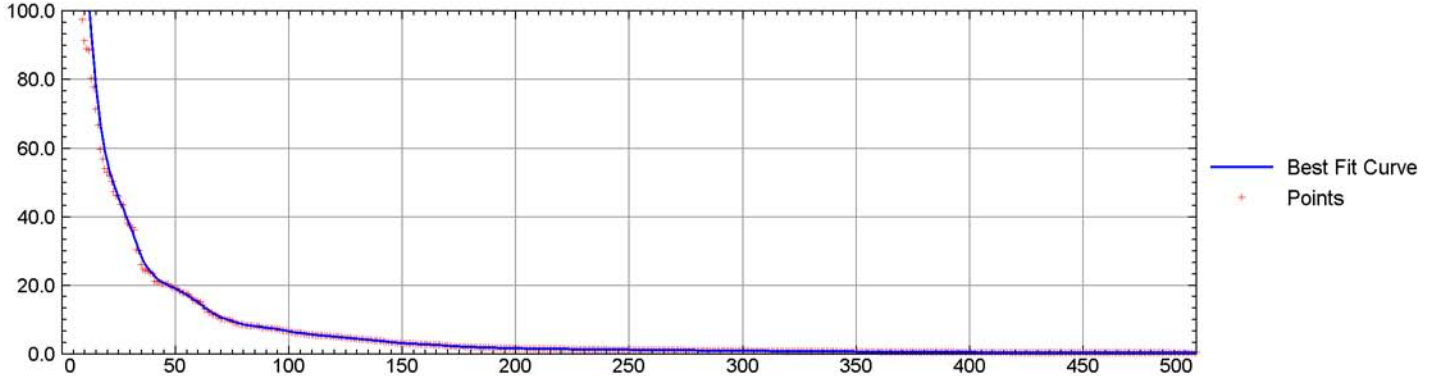


Figure 20c

database: GPO Seeded Yield Curves.gdb line/group: Targets_Ch3

2004/11/08

Camp Croft GPO - Yield Curve - Sum Channels 1, 2 & 3

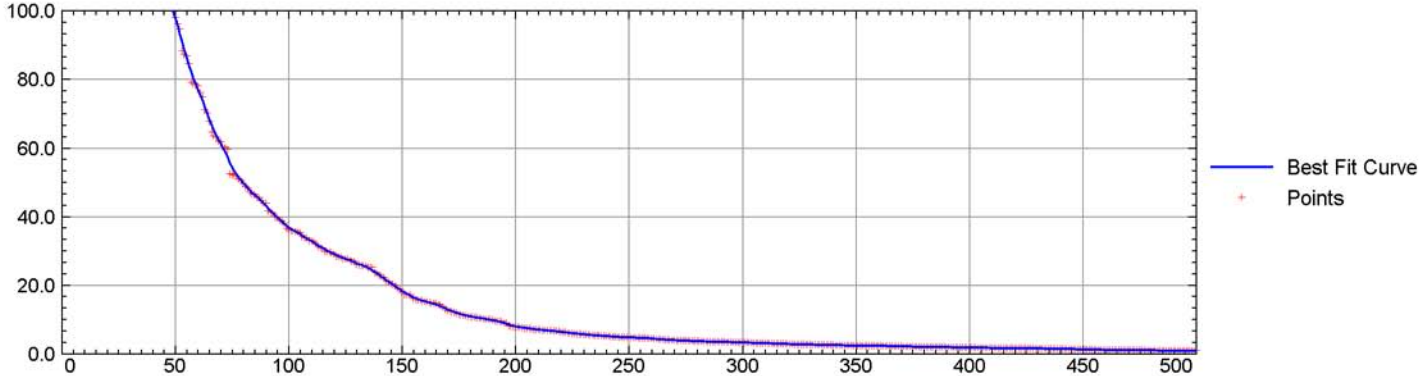
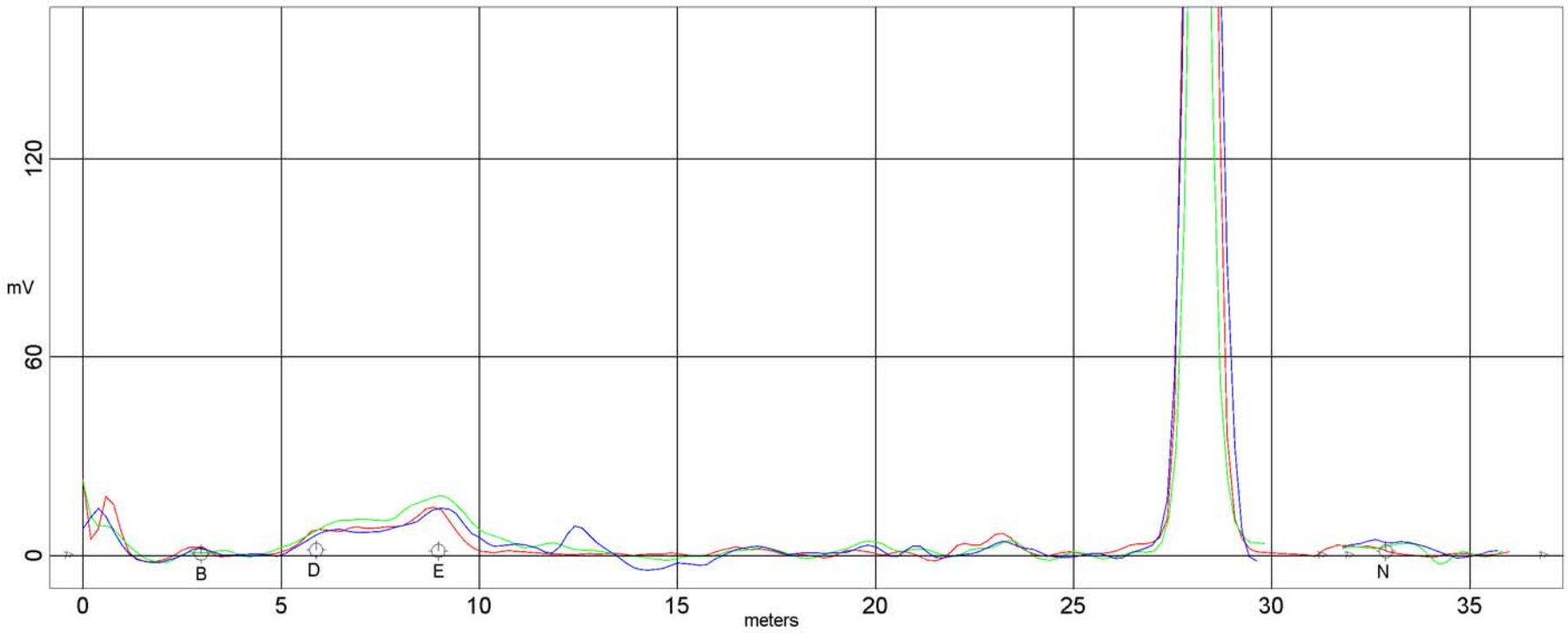


Figure 20d

database: GPO Seeded Yield Curves.gdb line/group: Targets_ChSum

2004/11/08



Legend

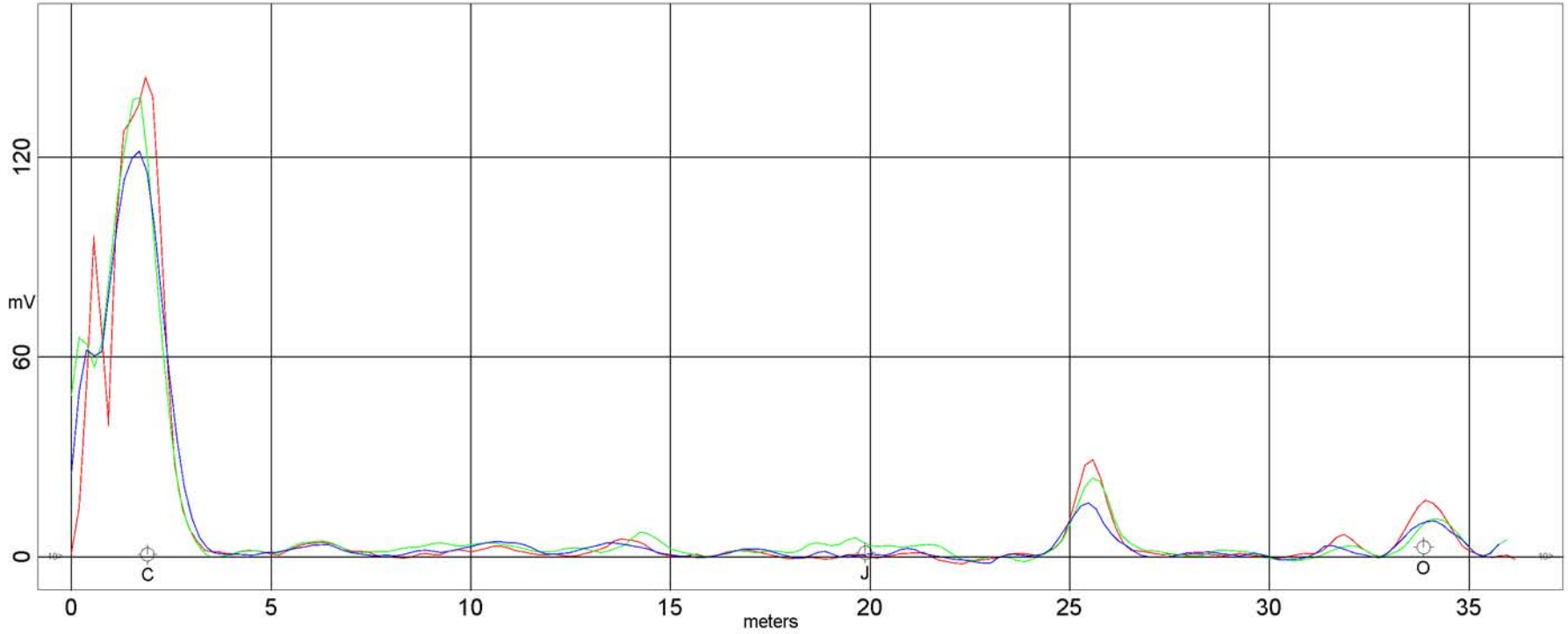
10/21/2004 Average Line Speed = 1.52 mph
11/19/2004 Average Line Speed = 3.04 mph
11/19/2004 Average Line Speed = 3.68 mph
B Seed Item with Identifier

Figure 21a

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Seeded GPO - Line 7 Speed Test
Camp Croft, South Carolina

Dates of Survey: October 21, 2004
November 19, 2004



Legend

10/21/2004 Average Line Speed = 1.66 mph

11/19/2004 Average Line Speed = 3.47 mph

11/19/2004 Average Line Speed = 3.81 mph

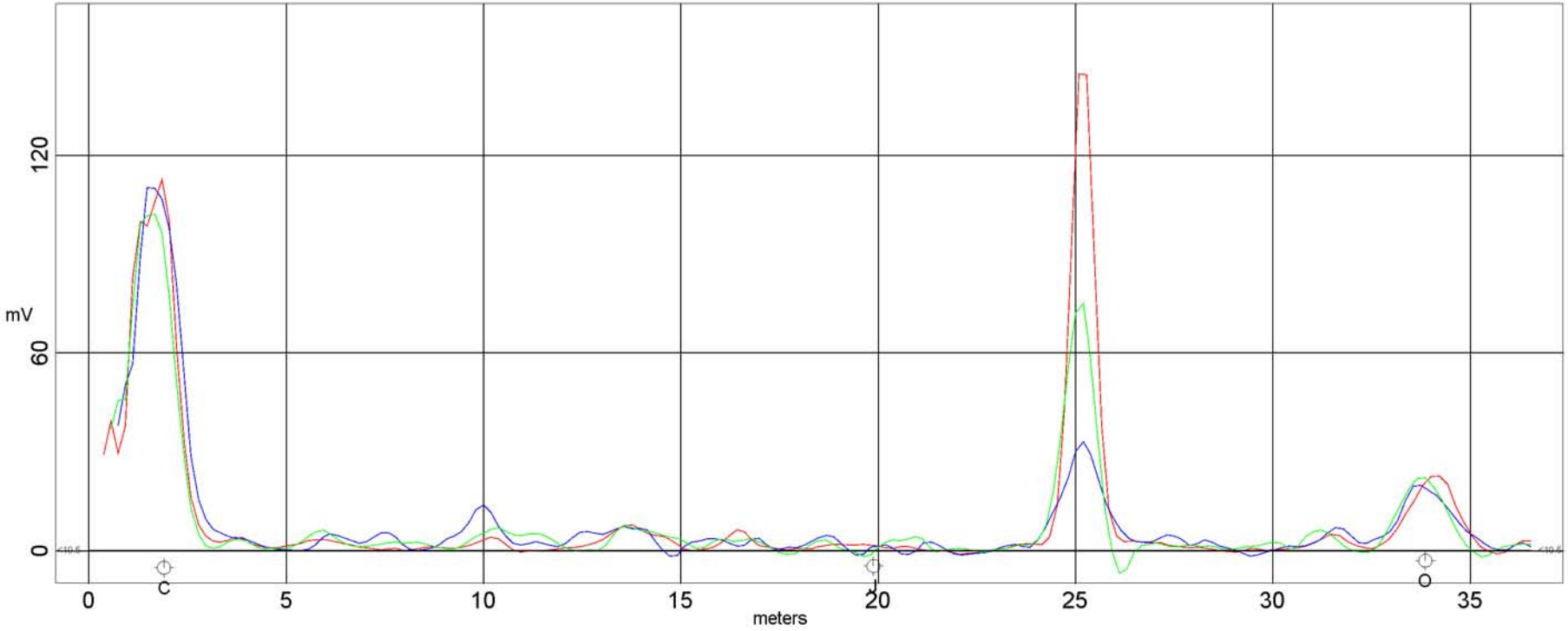
B Seed Item with Identifier

Figure 21b

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Seeded GPO - Line 10 Speed Test
Camp Croft, South Carolina

Dates of Survey: October 21, 2004
November 19, 2004



Legend

10/21/2004 Average Line Speed = 1.76 mph
11/19/2004 Average Line Speed = 3.18 mph
11/19/2004 Average Line Speed = 3.54 mph
Seed Item with Identifier
B

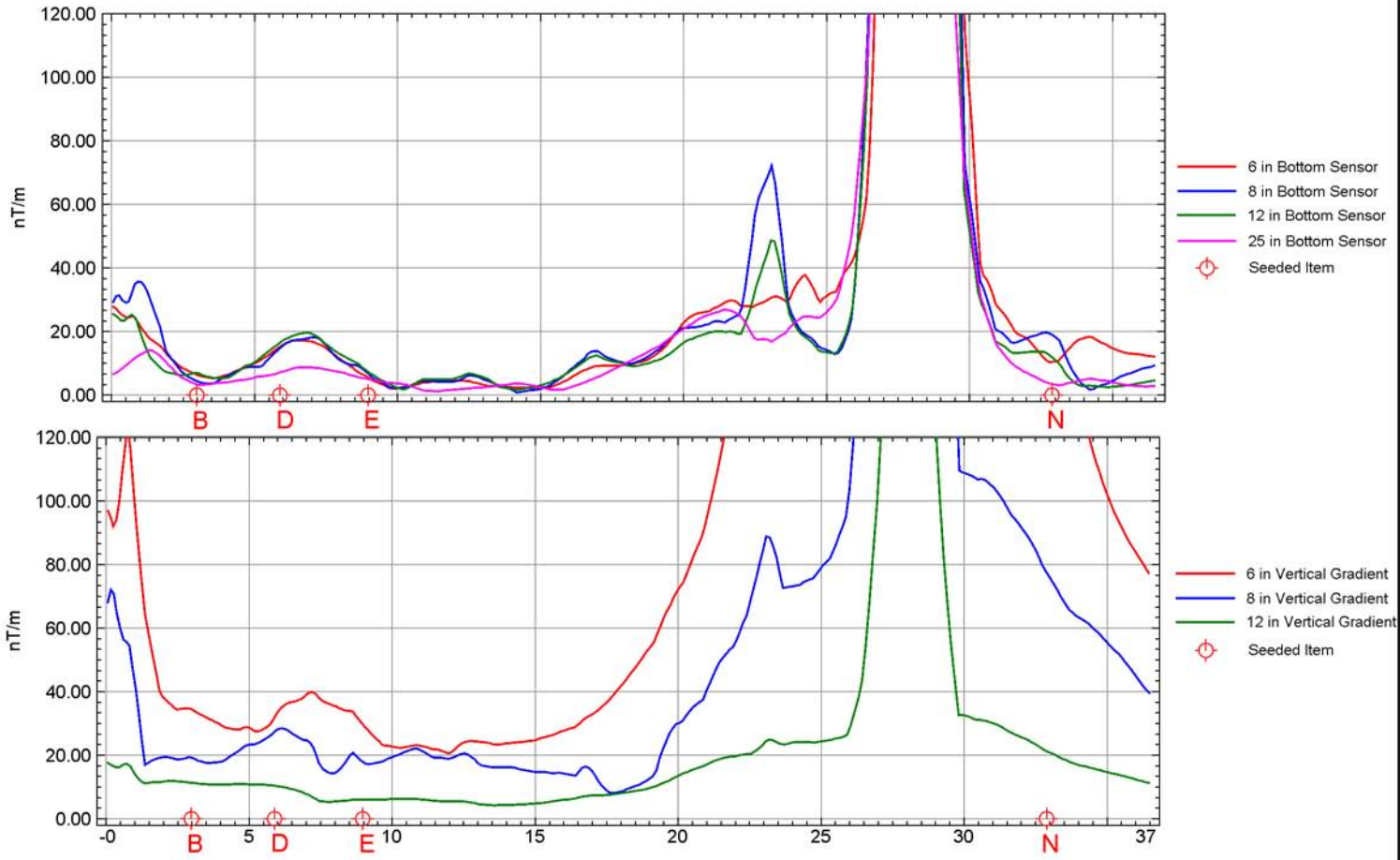
Figure 21c

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Seeded GPO - Line 10.5 Speed Test
Camp Croft, South Carolina

Dates of Survey: October 21, 2004
November 19, 2004

Optimum Analytic Signal Sensor Height Comparison - 6 inch, 8 inch, 12 inch & 25 inch
Seeded GPO - Line 7 - Camp Croft, South Carolina



NOTE: The 25 in sensor height survey was conducted with total field (nT), not vertical gradient.

Figure 22

11/19/04 - Shake Test - EM61

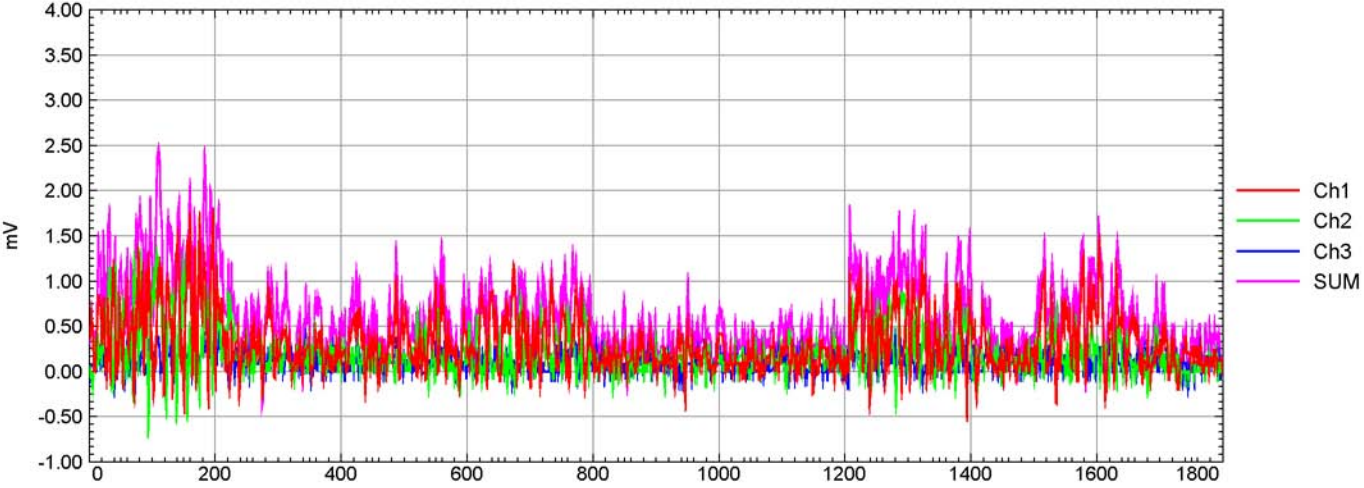


Figure 23

2004/11/19

GPO Seeded - Repeat Line 6.5 - EM61 - Moderate Pace Speed Test - SUM Ch1, Ch2 & Ch3

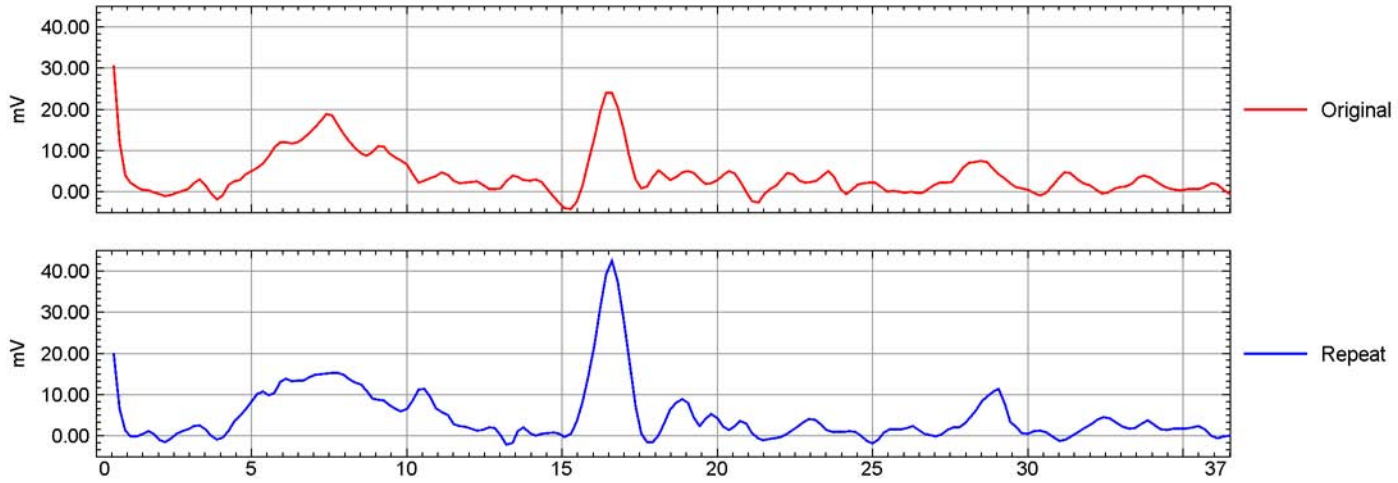


Figure 24A

2004/11/19

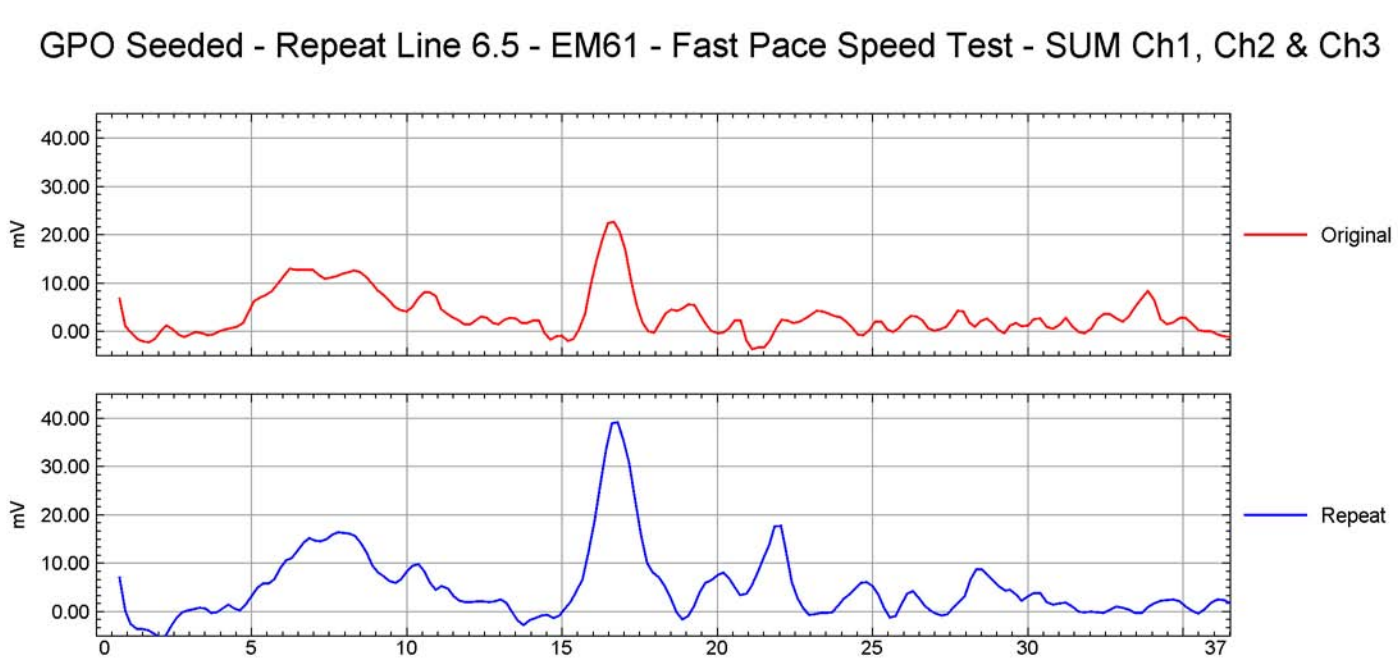


Figure 24B

2004/11/19

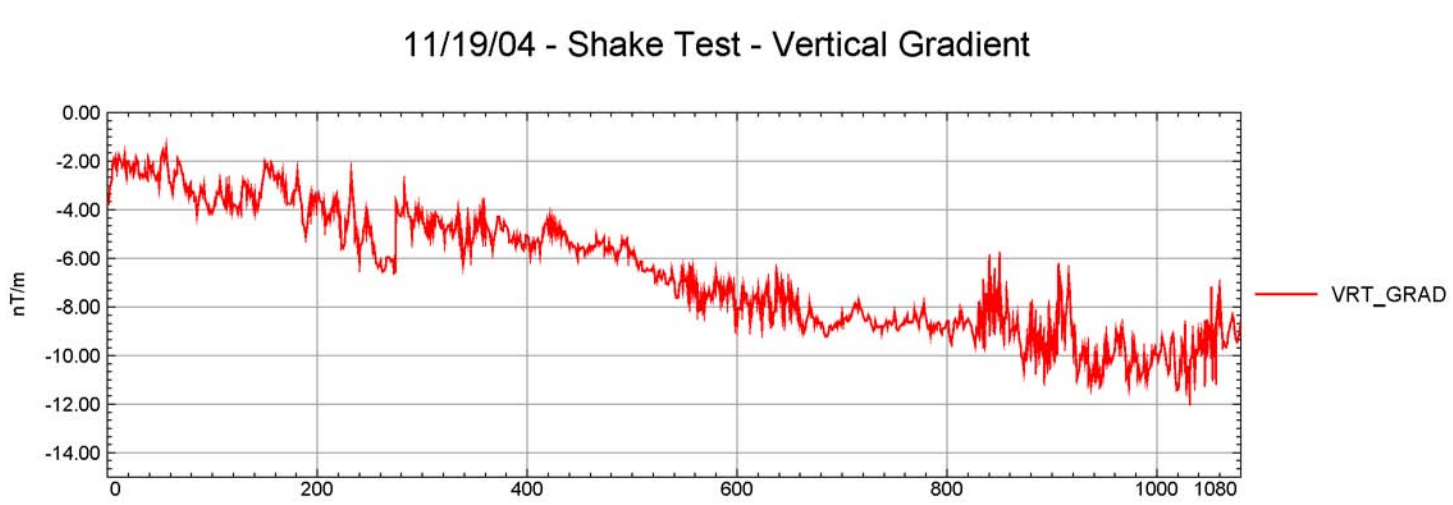


Figure 25A

2004/11/19

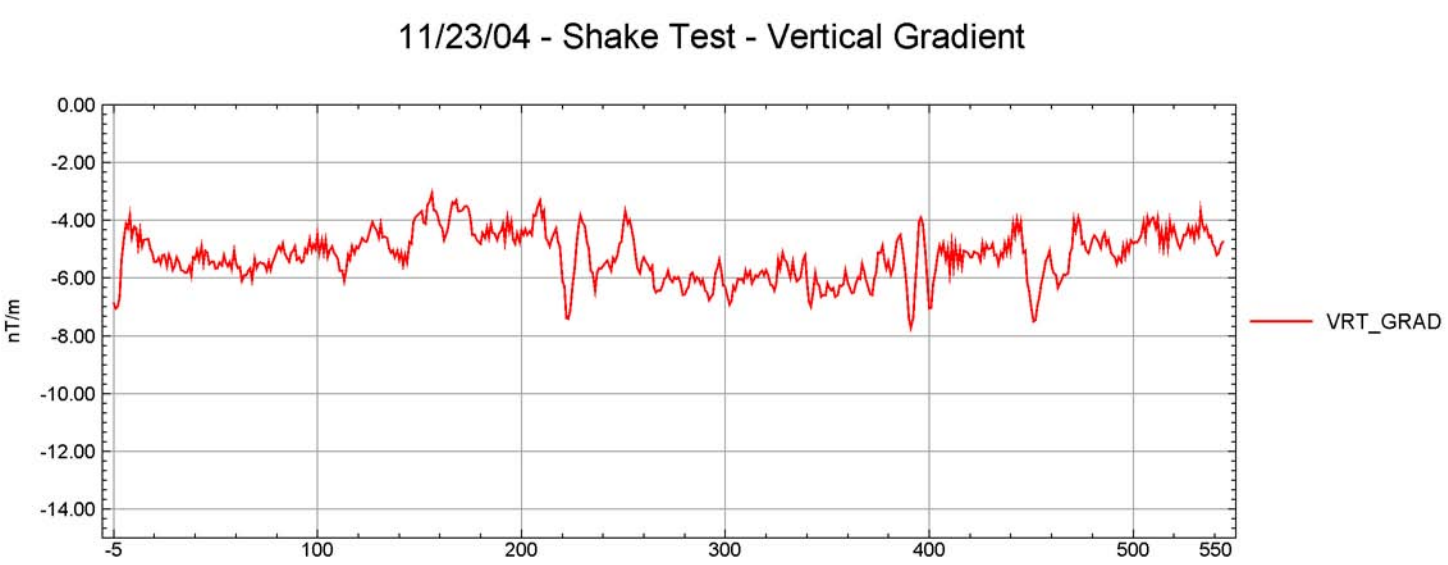


Figure 25B

2004/11/23

APPENDIX C
PHOTOGRAPHS

FORMER CAMP CROFT
GPO LETTER REPORT

DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE507 2.36" Rocket Motor Thick Walled Simulant Line: 2 @ 26m Depth: 15.1 Inches BGS to Top Cntr Perpendicular to Line	
DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE505 2.36" Rocket Motor Thick Walled Simulant Line: 2 @ 30m Depth: 12.4 Inches BGS to Top Cntr Perpendicular to Line	

FORMER CAMP CROFT
GPO LETTER REPORT

DATE: 21 Oct 2004	
DIRECTION: Down	
PHOTO BY: Terry Farmer	
DESCRIPTION: Item: ZE506 2.36" Rocket Motor Thick Walled Simulant Line: 2 @ 33m Depth: 12.3 Inches BGS to Top Cntr Perpendicular to Line	

DATE: 21 Oct 2004	
DIRECTION: Down	
PHOTO BY: Terry Farmer	
DESCRIPTION: Item: ZE501 2.36" Rocket Motor Line: 8 @ 6m Depth: 14.3 Inches BGS to Top Cntr Perpendicular to Line	

FORMER CAMP CROFT
GPO LETTER REPORT

DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE502 2.36" Rocket Motor Line: 8 @ 9m Depth: 12.5 Inches BGS to Top Cntr Perpendicular to Line	
DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE513 M9 Rifle Grenade with Approximate Head Line: 8 @ 14m Depth: 23 Inches BGS to Top Cntr Perpendicular to Line	

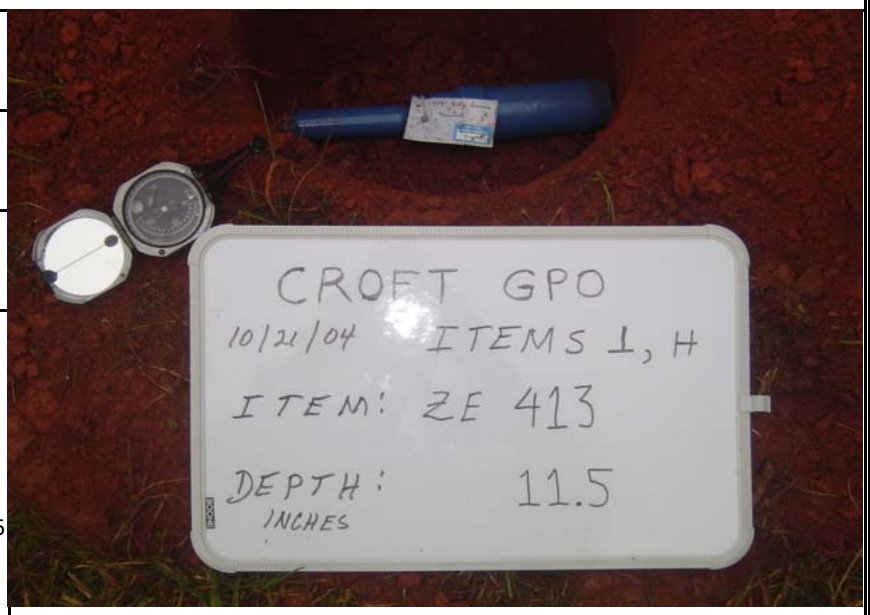
FORMER CAMP CROFT
GPO LETTER REPORT

DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE404 Mk II Grenade Line: 14 @ 3m Depth: 23.5 Inches BGS to Top Cntr Perpendicular to Line	
DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: NA499 Mk II Grenade Line: 14 @ 6m Depth: 22.6 Inches BGS to Top Cntr Perpendicular to Line	

FORMER CAMP CROFT
GPO LETTER REPORT

DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE402 Mk II Grenade Line: 14 @ 9m Depth: 15.3 Inches BGS to Top Cntr Perpendicular to Line	
DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE509 M9 Rifle Grenade Thin Walled Simulant Line: 14 @ 33m Depth: 22 Inches BGS to Top Cntr Perpendicular to Line	

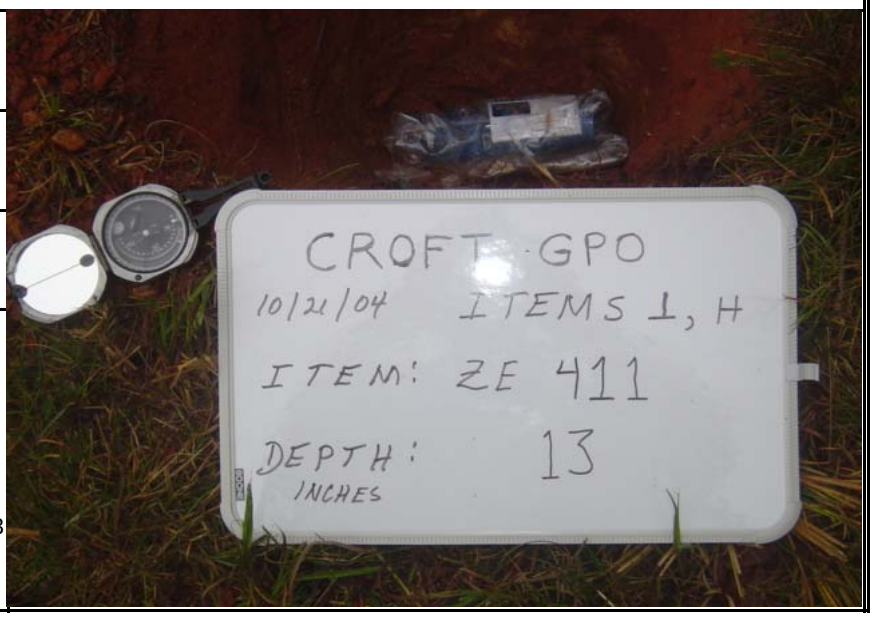
FORMER CAMP CROFT
GPO LETTER REPORT

DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE413 M9 Rifle Grenade Thick Walled Simulant Line: 20 @ 2m Depth: 11.5 Inches BGS to Top Cntr Perpendicular to Line	
DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE512 M9 Rifle Grenade Thin Walled Simulant Line: 20 @ 20m Depth: 23.3 Inches BGS to Top Cntr Perpendicular to Line	

FORMER CAMP CROFT
GPO LETTER REPORT

DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE410 M9 Rifle Grenade Thick Walled Simulant Line: 20 @ 34m Depth: 28.5 Inches BGS to Top Cntr Perpendicular to Line	
DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE408 2.36" Rocket Motor Thin Walled Simulant Line: 26 @ 16m Depth: 11.5 Inches BGS to Top Cntr Perpendicular to Line	

FORMER CAMP CROFT
GPO LETTER REPORT

DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE409 2.36" Rocket Motor Thin Walled Simulant Line: 26 @ 19m Depth: 12.3 Inches BGS to Top Cntr Perpendicular to Line	
DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE411 2.36" Rocket Motor Thin Walled Simulant Line: 26 @ 23m Depth: 13 Inches BGS to Top Cntr Perpendicular to Line	

FORMER CAMP CROFT
GPO LETTER REPORT

DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE405 Mk II Grenade Line: 52 @ 18m Depth: 17.5 Inches BGS to Top Cntr Perpendicular to Line	
DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE412 M9 Rifle Grenade Thick Walled Simulant Line: 55 @ 26m Depth: 18.3 Inches BGS to Top Cntr Perpendicular to Line	

FORMER CAMP CROFT
GPO LETTER REPORT

DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE414 M9 Rifle Grenade Thick Walled Simulant Line: 62 @ 15m Depth: 22.3 Inches BGS to Top Cntr Perpendicular to Line	
DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE406 Mk II Grenade Line: 62 @ 19m Depth: 16 Inches BGS to Top Cntr Perpendicular to Line	

FORMER CAMP CROFT
GPO LETTER REPORT

DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE407 M9 Rifle Grenade Thick Walled Simulant Line: 63 @ 23m Depth: 19.5 Inches BGS to Top Cntr Perpendicular to Line	
DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE511 M9 Rifle Grenade Thin Walled Simulant Line: 61 @ 26m Depth: 20 Inches BGS to Top Cntr Perpendicular to Line	

FORMER CAMP CROFT
GPO LETTER REPORT

DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE508 M9 Rifle Grenade Thin Walled Simulant Line: 59 @ 29m Depth: 19.5 Inches BGS to Top Cntr Perpendicular to Line	
DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE500 2.36" Rocket Motor and Body Line: 63 @ 35m Depth: 14.8 Inches BGS to Top Cntr Perpendicular to Line	

FORMER CAMP CROFT
GPO LETTER REPORT

DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE510 M9 Rifle Grenade Thin Walled Simulant Line: 67 @ 20m Depth: 23 Inches BGS to Top Cntr Perpendicular to Line	
DATE: 21 Oct 2004 **DIRECTION:** Down **PHOTO BY:** Terry Farmer **DESCRIPTION:** Item: ZE403 Mk II Grenade Line: 67 @ 30m Depth: 16.5 Inches BGS to Top Cntr Perpendicular to Line	

APPENDIX D2
GEOPHYSICAL DATA
(Deleted)

APPENDIX D3
DIG SHEETS

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

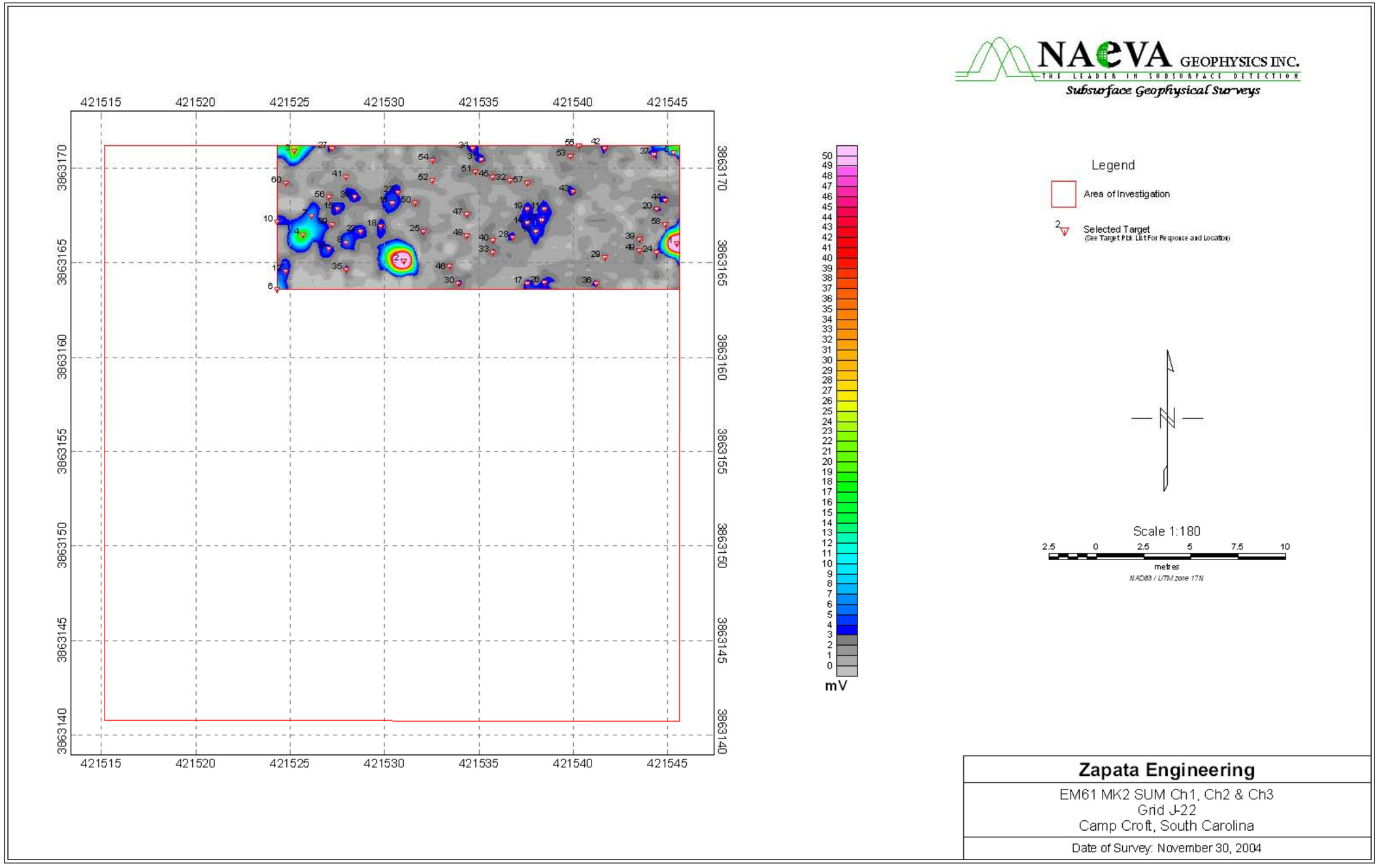
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: J22
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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				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)	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
J-22_C2	421525.2422	3863170.785	33.0408	98.5785		6	J-22_3	11/21/04			0	0		CD		0.75	3/4" Conduit, UP	-6	0			9	9+		01/31/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005

* Fill in Units (mV, nT/n, 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
421515
421520
421525
421530
421535
421540
421545
3863170
3863165
3863160
3863155
3863150
3863145
3863140
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
mV
Scale 1:180
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid J-22
Camp Croft, South Carolina
Date of Survey: November 30, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

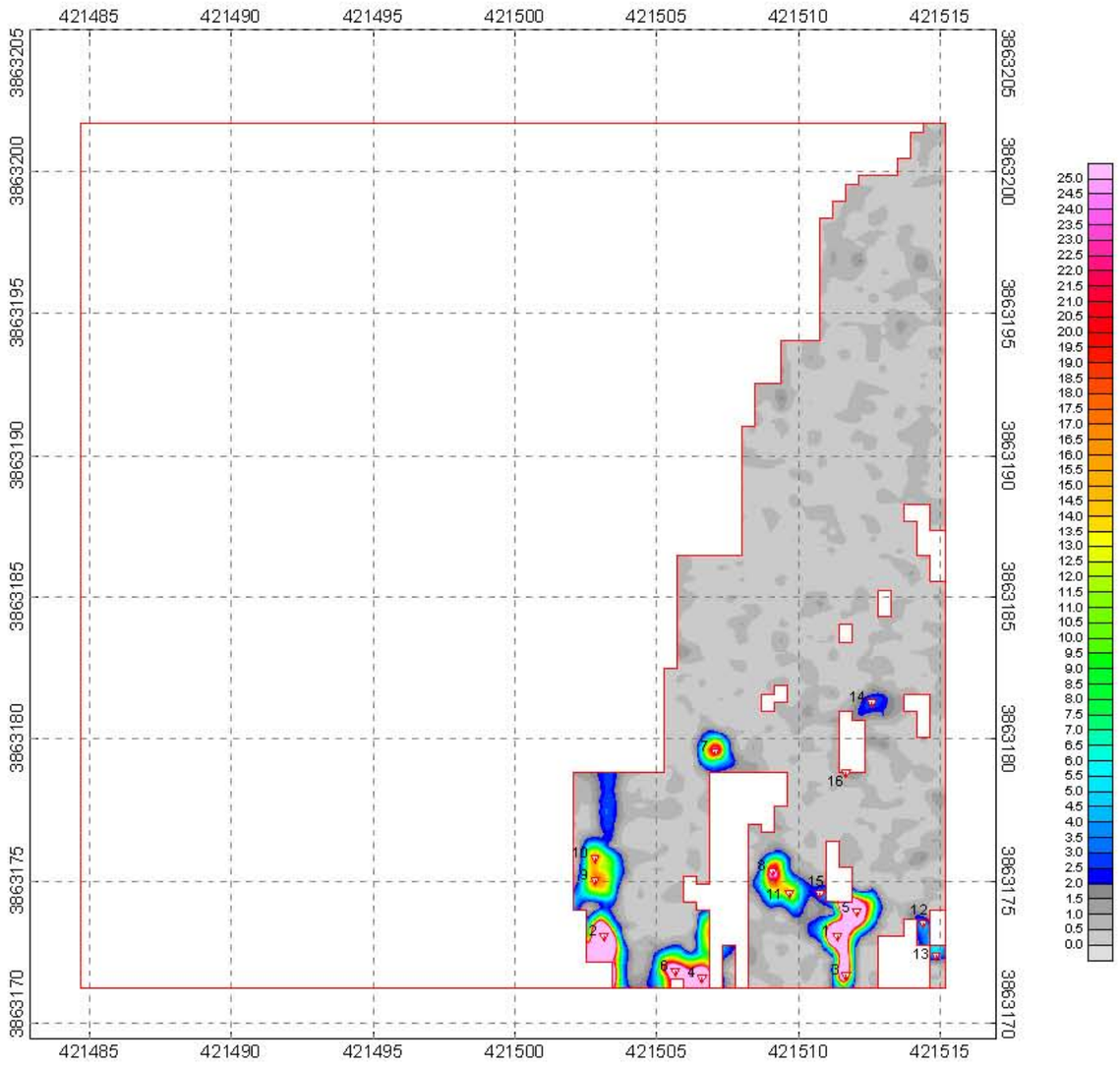
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: K21
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC 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)	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)	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
K-21_15	421513.6578	3863194.683	95	77	17.0			11/30/04			0	0		CD	1.5	6 x .75 x .5	piece of steel, Rusted	0	0	NE	15	4	4	K21_15 - #031	1/18/06	bam	NA	DRA	02/22/06	YES	RVW	
K-21_17	421512.1305	3863180.668	90	31	17.0			11/30/04			0	0		MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2, Complete, Rusted	0	0	NE	30	11	13	k21_17 - #031	1/18/06	bam	NA	DRA	02/22/06	YES	RVW	
K-21_8	421512.5858	3863174.196	91.5	9.76	68.0			11/30/04			0	0		CD	.5	8 x .25 x .25	big nail, Rusted	0	0	NE	0	0	0	k21_8 - #029/K21_8a - #005	1/18/06	bam	NA	DRA	02/22/06	YES	RVW	
K-21_C1	421511.3667	3863173.05	87.5	6		123	K-21_3	11/30/04			0	0		CD	1	0.125 x 3 x 24	Blade - lawnmower	25.459689	25.459689			0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-21_C11	421509.6913	3863174.574	82	11		15		11/30/04			0	0		CD	1	0.5 x 20	Rebar	-12	0			0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-21_C12	421514.4139	3863173.507	97.5	7.5		6	K-21_18	11/30/04			0	0		CD		0.125 x 28	Spring/wire	25.459689	-25.45969			2	4		02/01/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-21_C13	421514.8706	3863172.364	99	3.75		6	K-21_13	11/30/04			0	0		CD		0.125 x 28	Spring/wire	0	10			4	4		02/01/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-21_C14	421512.5878	3863181.277	91.5	33		4	K-21_14	11/30/04			0	0		MD	1.5	3 x 5	MK II prac - expended	12	0			12	14		02/01/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-21_C15	421510.7578	3863174.574	85.5	11		3	K-21_12	11/30/04			0	0		CD	1	0.5 x 20	Rebar	10	0			0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-21_C16	421511.673	3863178.839	88.5	25		3	K-21_16	11/30/04			0	0		CD		0.25 x 6	Survey nail	12	0			0	3		02/01/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-21_C5	421512.061	3863173.905	89.7777	8.8049		48	K-21_1	11/30/04			0	0		CD	1	0.125 x 3 x 24	Blade - lawnmower	-7.072136	-7.072136			0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-21_C7	421507.0587	3863179.576	73.3556	27.4132		31	K-21_6	11/30/04			0	0		MD	1.5	24	MK2 practice - expended	0	0				8		02/01/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-21_C7.1	421507.0587	3863179.576	73.3556	27.4132		31		11/30/04			0	0		CD	1.5	5	rebar	0	0				10		02/01/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-21_C8	421509.0821	3863175.336	80	13.5		29	K-21_7	11/30/04			0	0		NC			dug nothing found								1/30/06	sfr	YES	TF	01/30/06	NA	DRA	02/22/06
K-21_C8	421509.0821	3863175.336	80	13.5		29	K-21_7	11/30/04			0	0		NC			No find								02/01/05	RLF	NA	DRA	02/22/06	NO	AJP	3/5/2005

* 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

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

Scale 1:180

2.5 0 2.5 5 7.5 10

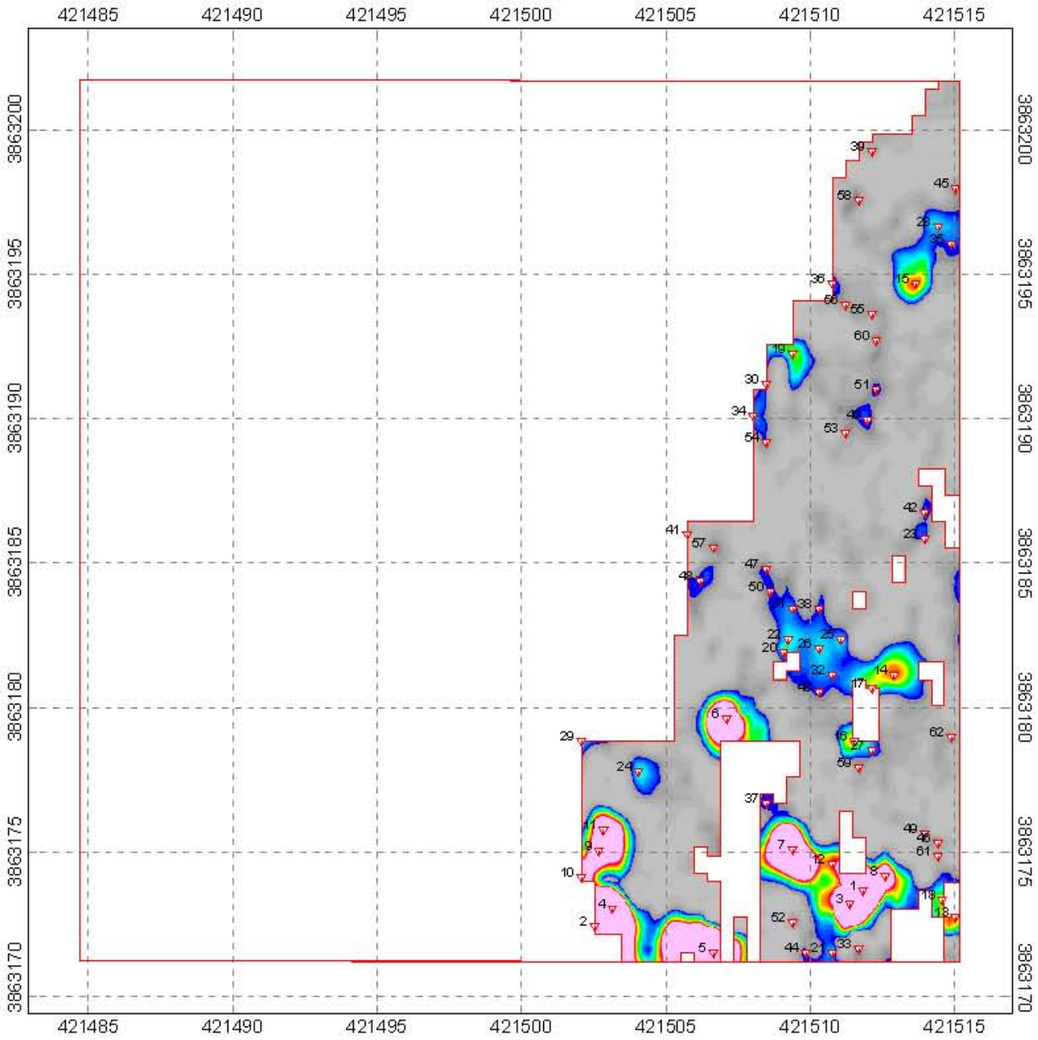
metres

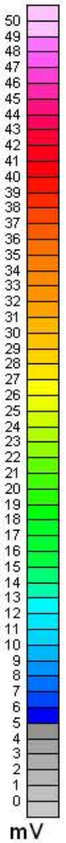
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid K-21
Camp Croft, South Carolina

Date of Survey: November 30, 2004



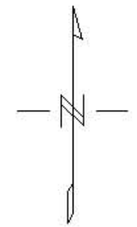


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

2.5 0 2.5 5 7.5 10

metres

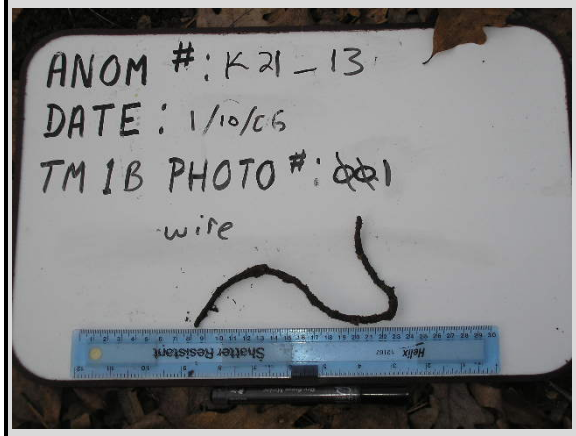
NAD83 / UTM zone 17N

Zapata Engineering

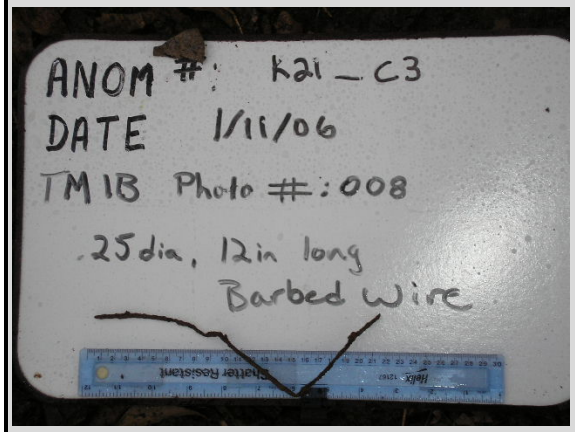
EM61 MK1 SUM Ch1, Ch2 & Ch3
Grid K-21
Camp Croft, South Carolina

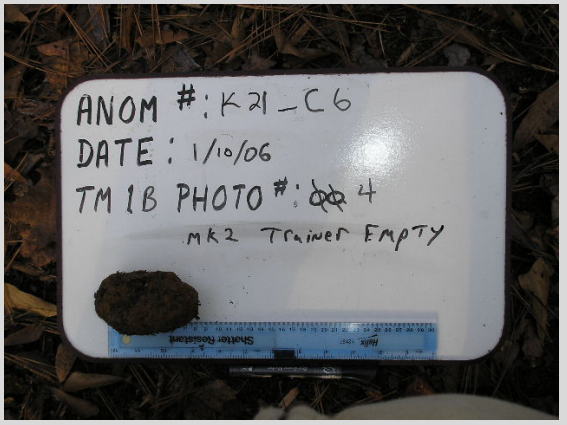
Date of Survey: November 30, 2004

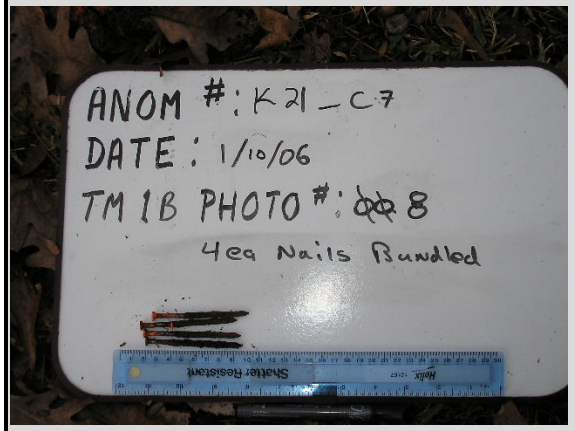
GRID K21 DIG PHOTOS



GRID K21 DIG PHOTOS (CONTINUED)







ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

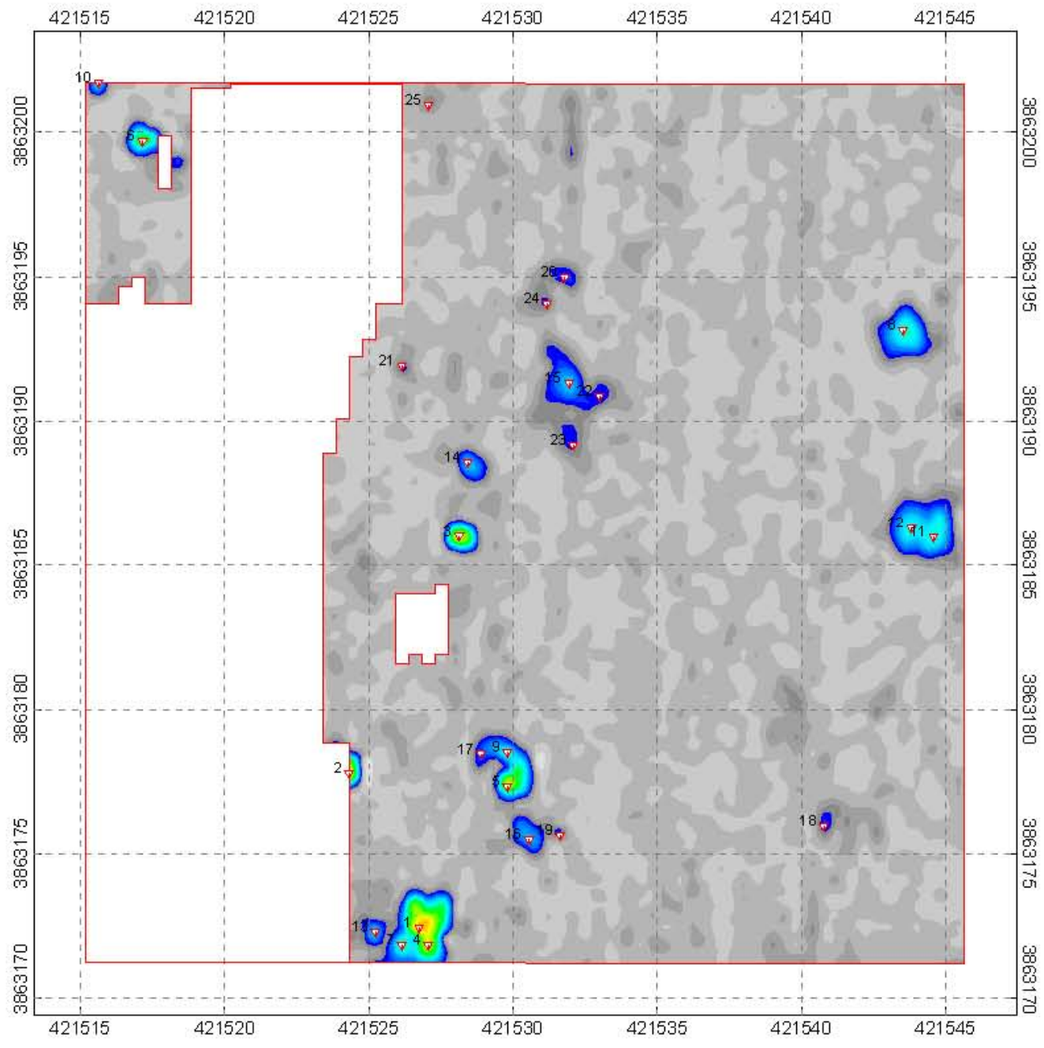
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: K22
Field Book ID:

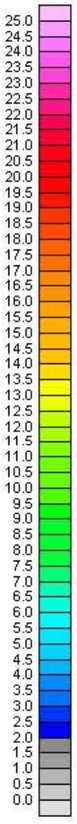
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
K-22_11	421544.5657	3863200.617	96.5	96.5	13.0			11/29/04			0	0		CD	25	2 x 2 x .25	aluminum foil, Oxidized	0	-9			4	4	K22_11 - #022/K22_11a - #043	1/25/06	bam	NA	DRA	02/22/06	YES	RVW	
K-22_12	421531.4817	3863192.393	53.5	69.5	14.0			11/29/04			0	0		NC			target under cart path								1/18/06	bam	YES	TF	01/25/06	NA	DRA	02/22/06
K-22_14	421545.3282	3863183.291	98.9519	39.6382	13.0			11/29/04			0	0		MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2, Complete, Rusted	0	0	N	75	10	12	K22_14 - #028	1/18/06	bam	YES	TF	01/25/06	YES	RVW	02/22/06
K-22_15	421542.9703	3863180.423	91.2159	30.2247	13.0			11/29/04			0	0		MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2, Complete, Rusted	0	0	SE	30	9	11	K22_15 - #032	1/18/06	bam	YES	TF	01/25/06	YES	RVW	02/22/06
K-22_17	421528.4294	3863172.132	48.5	3	11.0			11/29/04			0	0		NC			target under cart path							K22_17 - #026	1/18/06	bam	NA	DRA	02/22/06	NA	DRA	02/22/06
K-22_18	421529.0032	3863167.471	45.3696	53.3441	11.0			11/29/04			0	0		CD	.25	1.5 x 1.5 x .25	pieces of steel, Rusted	0	0	NA	0	5	5	K22_18 - #031/K22_18b - #041	1/25/06	bam	NA	DRA	02/22/06	YES	RVW	
K-22_19	421539.5753	3863180.45	80.0735	30.3099	11.0			11/29/04			0	0		MD	1	5 x 2.75 x 2.75	grenade, hand, prac, MK2, Complete, Rusted	0	0	SW	15	12	14	K22_19 - #030	1/18/06	bam	YES	TF	01/25/06	YES	RVW	02/22/06
K-22_26	421545.3263	3863177.384	98.9476	20.0876	10.0			11/29/04			0	0		UXO	1	5 x 2.75 x 2.75	grenade, hand, fragmentation, MK2, Complete, Rusted	0	0	NE	30	18	20	K22_26 - #035	1/18/06	bam	NA	DRA	02/22/06	YES	RVW	
K-22_20	421542.6934	3863176.52	90.3106	17.4144	9.0			11/29/04			0	0		CD	.5	14 x .25 x .25	14 in steel rod, Rusted	0	0	E	15	14	15	K22_20 - #039	1/19/06	bam	YES	TF	01/25/06	YES	RVW	01/25/06
K-22_3	421524.9256	3863172.742	32	5	43.0			11/29/04			0	0		CD	0		metal 36 inches deep hole full of water, Rusted	0	0	NW	15	36	36	K22_3 - #010	1/19/06	bam	YES	TF	01/25/06	YES	RVW	01/25/06
K-22_32	421531.1767	3863191.022	52.5	65	9.0			11/29/04			0	0		NC			in cart path								1/30/06	ddm	NA	DRA	02/22/06	NA	DRA	02/22/06
K-22_C1	421526.7537	3863172.437	30	4		16	K-22_1	11/29/04			0	0		CD	5	6 x 10	RR tie plate - tie still hot - LIP	7.0721358	-7.072136			6	11		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-22_C10	421515.6402	3863201.691	1.5	100		6	K-22_30	11/29/04			0	0		CD	25	.5 x .25 x .25	large nail, Rusted	0	0	NA	75	1	3	K22_C10 - #049	1/18/06	bam	NA	DRA	02/22/06	YES	RVW	
K-22_C10	421515.6402	3863201.691	1.5	100		6	K-22_30	11/29/04			0	0		GEO			Hot rock					3	3+		01/31/05	RW	NA	DRA	02/22/06	NO	AJP	3/5/2005
K-22_C11	421544.5818	3863185.991	96.5	48.5		6	K-22_4	11/29/04			0	0		CD			RR tie / LIP	0	-14			38			01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-22_C13	421525.2302	3863172.285	33	3.5		5		11/29/04			0	0		CD		0.25	Steel plate - LIP	-10	0			28	28+		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-22_C14	421520.4330	3863100.505	40.5	57		5	K-22_7	11/29/04			0	0		CD		2 x 3	Bearing buddy					5	5		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-22_C18	421540.7705	3863175.937	84	15.5		3	K-22_10	11/29/04			0	0		MD	0.25	3 x 5	MK II prac - expended					12	12		01/31/05	RW	NA	DRA	02/22/06	YES	DRA	02/21/06
K-22_C19	421531.6296	3863175.685	54	14.5		3		11/29/04			0	0		CD		0.125 x 1	Bottle cap					3	3		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-22_C2	421524.3175	3863177.77	30	21.5		15	K-22_8	11/29/04			0	0		CD		0.125 x 1	3 bottle caps	9.9009901	9.9009901			2	2		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-22_C21	421526.1495	3863191.938	36	68		3	K-22_63	11/29/04			0	0		MD	0.25	0.5 x 5	2 cresnce fuses - expended	-5.657709	-5.657709			4	5		01/21/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-22_C22	421533.0048	3863190.87	58.5	64.5		3		11/29/04			0	0		CD		0.125 x 1	Bottle cap	9.9009901	-9.90099			2	2		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-22_C23	421532.0903	3863189.194	55.5	59		2	K-22_65	11/29/04			0	0		NC			in cart path							K22_C23 - #027	1/30/06	SFR	NA	DRA	02/22/06	NA	DRA	02/22/06
K-22_C28	421532.0903	3863189.194	55.5	59		2	K-22_65	11/29/04			0	0		GEO			Hot rock					4			01/31/05	RW	NA	DRA	02/22/06	NO	AJP	3/5/2005
K-22_C25	421527.066	3863200.926	39	97.5		2	K-22_31	11/29/04			0	0		CD		0.125 x 5	Wire	-3	0			2	4		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-22_C3	421528.1284	3863185.996	42.5	48.5		14	K-22_6	11/29/04			0	0		CD		0.125 x 1	Ring	0	-12			3	3		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-22_C4	421527.0582	3863171.827	39	2		14		11/29/04			0	0		CD		0.125 x 12	Wire	0	-28			2	5		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-22_C6	421517.1632	3863199.71	6.5	93.5		9	K-22_9	11/29/04			0	0		CD		0.125 x 1	Ring	9.9009901	-9.90099			2	2		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-22_C7	421526.1441	3863171.828	36	2		8		11/29/04			0	0		CD		0.125 x 14	Wire	0	22			3	3		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-22_C8	421543.5173	3863193.152	93	72		7	K-22_13	11/29/04			0	0		CD	25	.5 x .25 x .25	.5 of a penny , revisit dug to 30 inches , hole still hot, Oxidized	0	0	NA	0	3	3	K22_C8 - #040	1/25/06	bam	YES	TF	01/25/06	YES	RVW	01/25/06
K-22_C8	421543.5173	3863193.152	93	72		7	K-22_13	11/29/04			0	0		GEO			Hot rock					3	30		01/31/05	RW	NA	DRA	02/22/06	NO	AJP	3/5/2005

* 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)

N

Scale 1:180

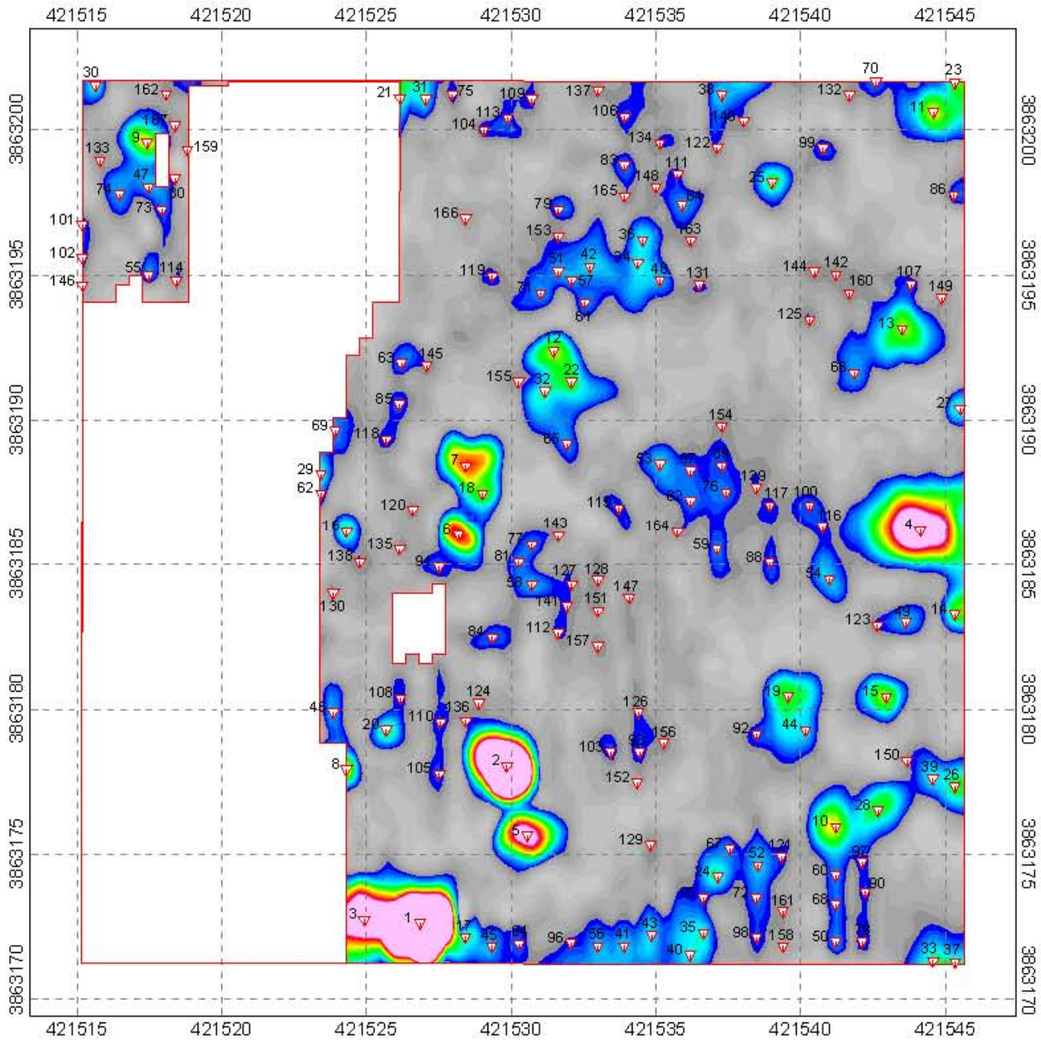
2.5 0 2.5 5 7.5 10
metres

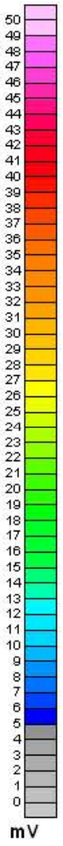
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid K-22
Camp Croft, South Carolina

Date of Survey: November 29, 2004





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)

Scale 1:180

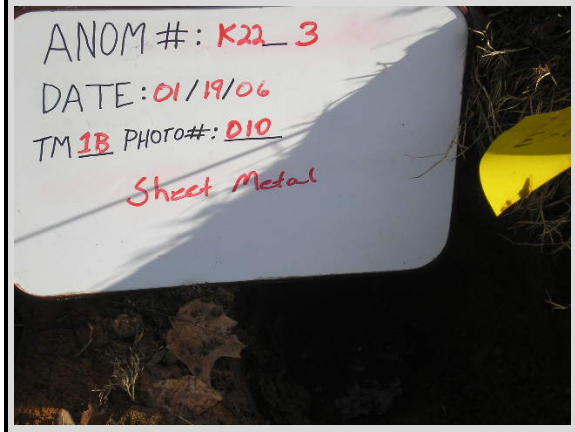
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

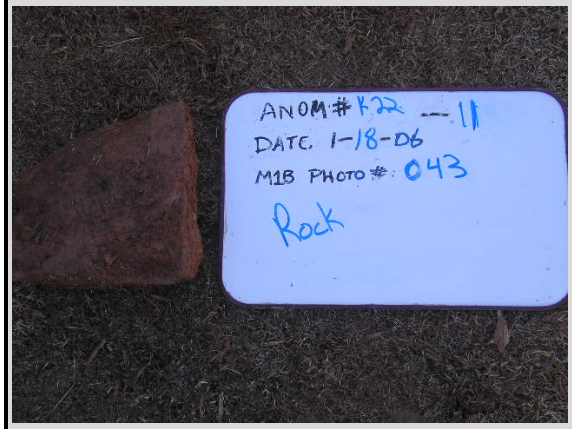
Zapata Engineering

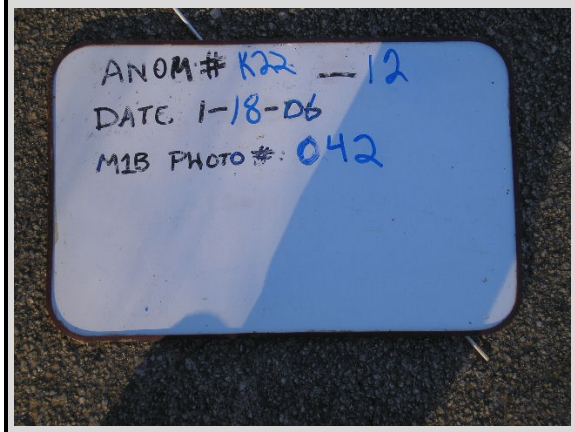
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid K-22
Camp Croft, South Carolina

Date(s) of Survey: November 29, 2004

GRID K22 DIG PHOTOS







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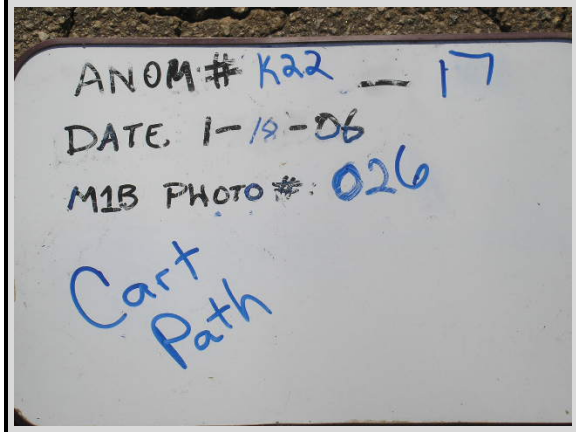
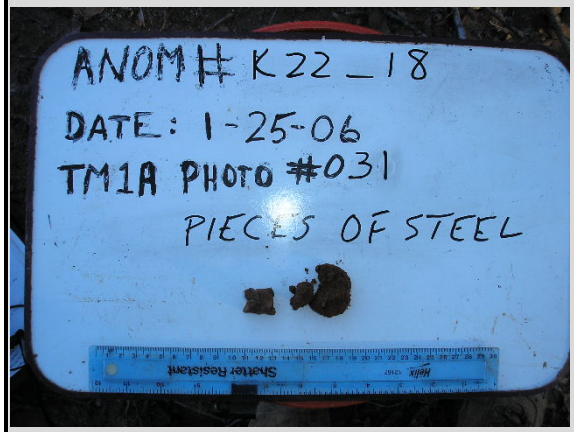
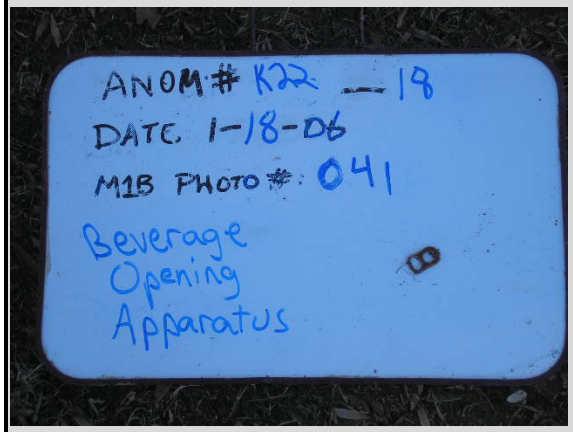
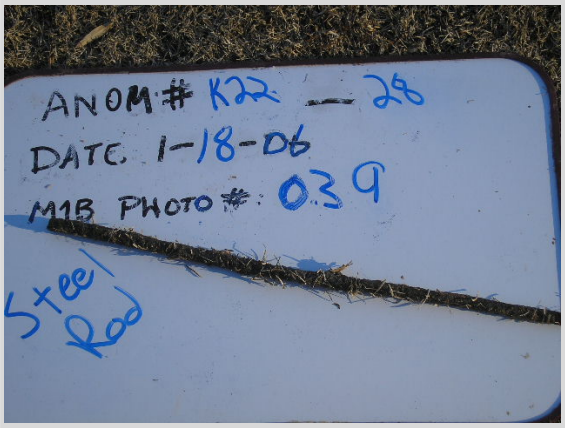
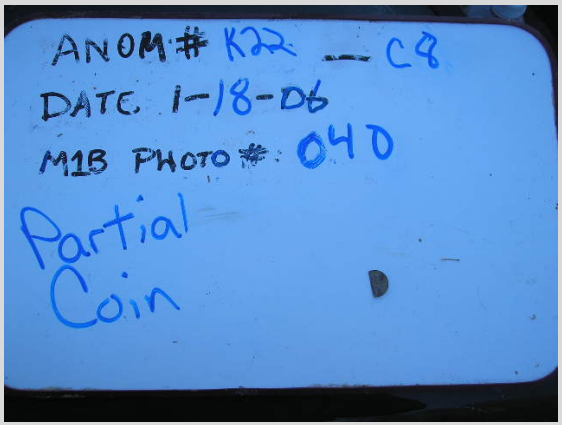


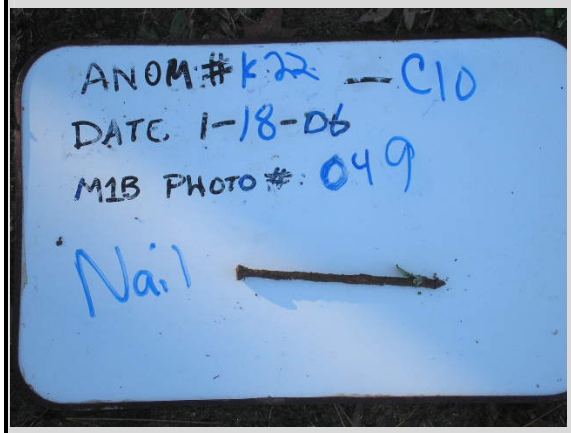


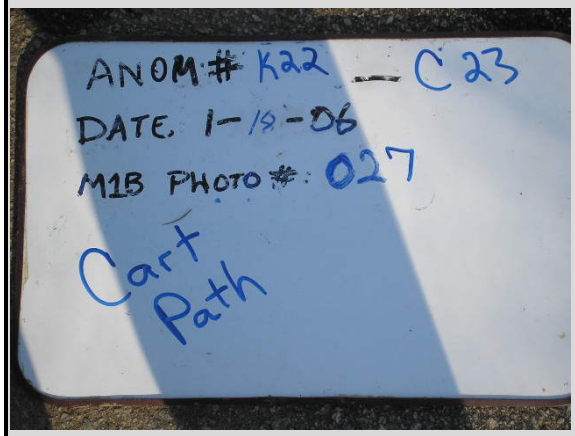




GRID K22 DIG PHOTOS (CONTINUED)







ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

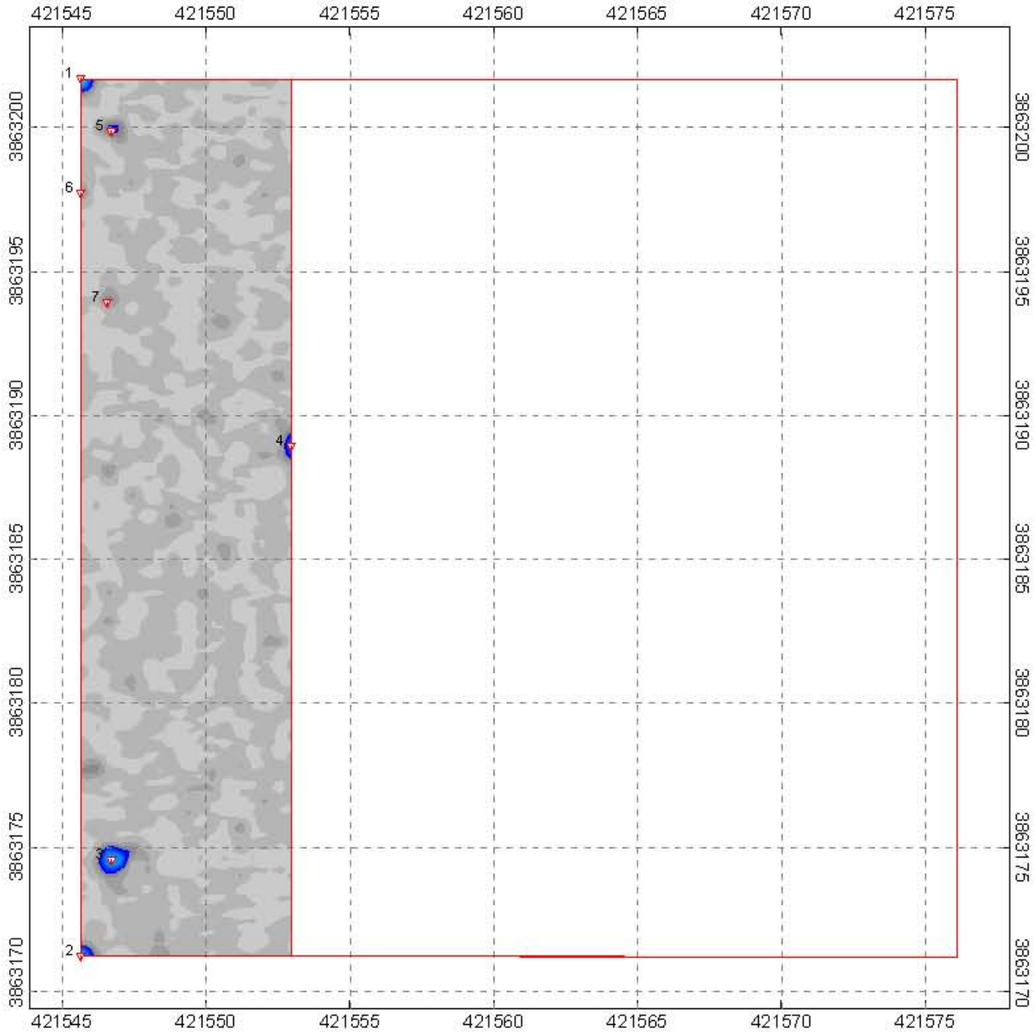
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: K23
Field Book ID:

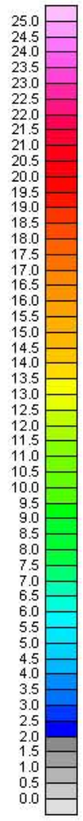
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
K-23_4	421546.1031	3863177.612	1.5	21	15.0			11/30/04			0	0		CD	.25	3 x .25 x .25	nail, Rusted	0	0	NA	90	0	1.5	K23_4 - #024	1/18/06	bam	NA	DRA	02/22/06	YES	RVW	
K-23_C1	421545.6524	3863201.683	0	100		6	K-23_2	11/30/04			0	0		CD		0.25 x 6	Nail					0	6		01/31/05	RW	Yes	HEL	02/01/05	YES	AJP	3/5/2005
K-23_C2	421545.6443	3863171.213	0	0		5	K-23_1	11/30/04			0	0		CD		0.25 x 6	Nail					0	6		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
K-23_C3	421546.7116	3863174.564	3.5	11		4	K-23_3	11/30/04			0	0		MD		3 x 5	MK II - expended	4	0			12	12		01/31/05	RW	Yes	HEL	02/01/05	YES	AJP	3/5/2005
K-23_C7	421546.5644	3863193.913	3	74.5		2	K-23_17	11/30/04			0	0		CD		0.25 x 2	Wire	0	-12			3	3		01/31/05	RW	Yes	HEL	02/01/05	YES	AJP	3/5/2005

* 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)

Scale 1:180

2.5 0 2.5 5 7.5 10

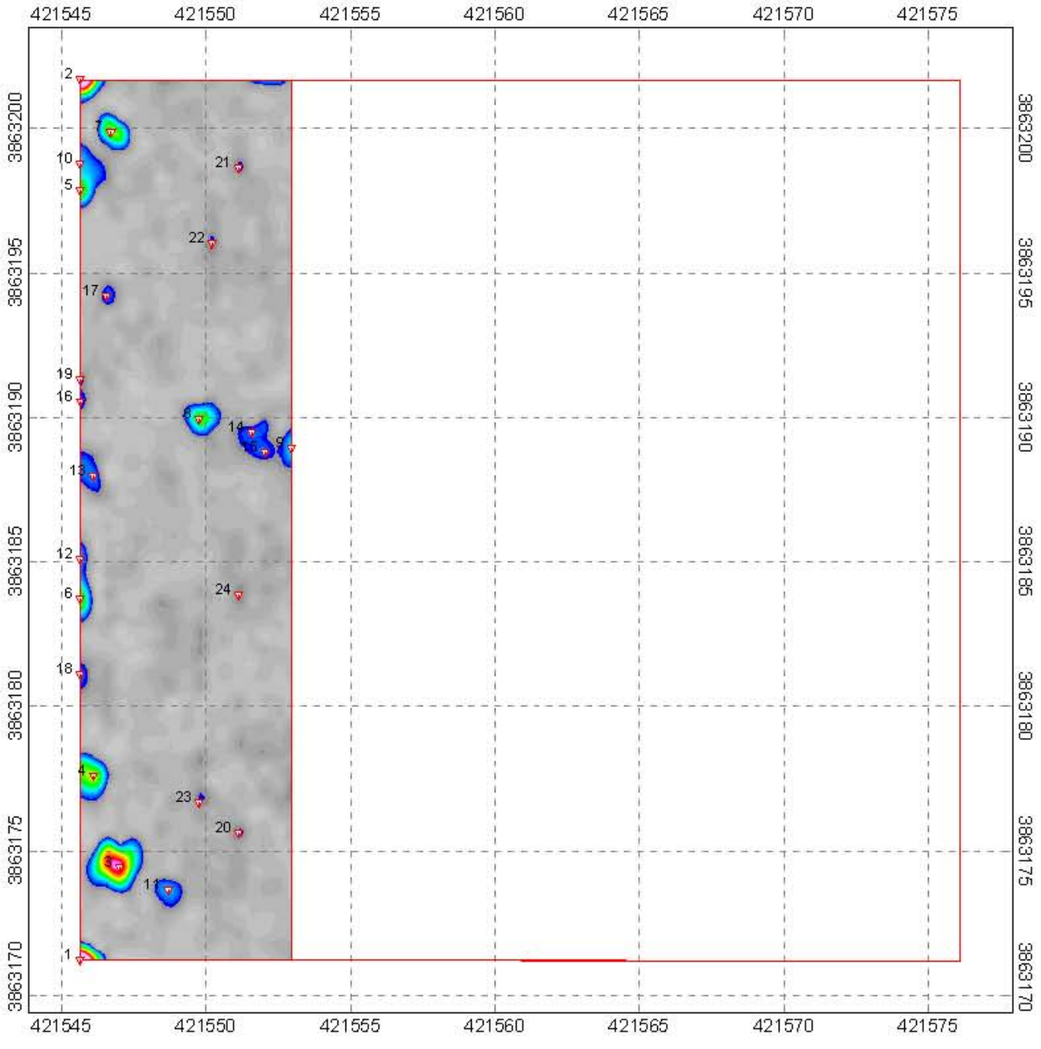
metres

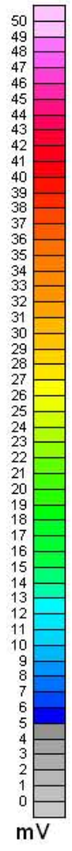
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid K-23
Camp Croft, South Carolina

Date of Survey: November 30, 2004





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)

Scale 1:180

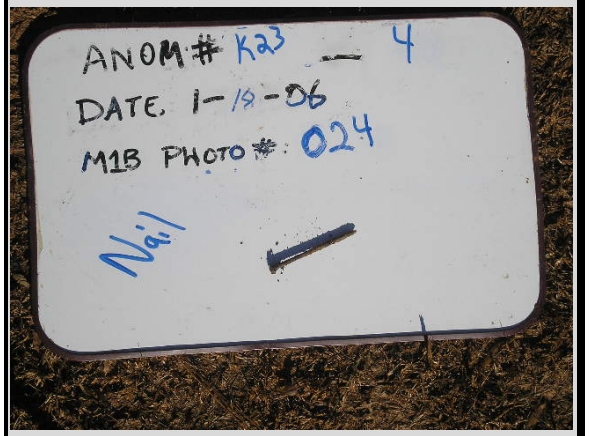
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid K-23
Camp Croft, South Carolina

Date of Survey: November 30, 2004

GRID K23 DIG PHOTOS



ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: L16
Field Book ID:

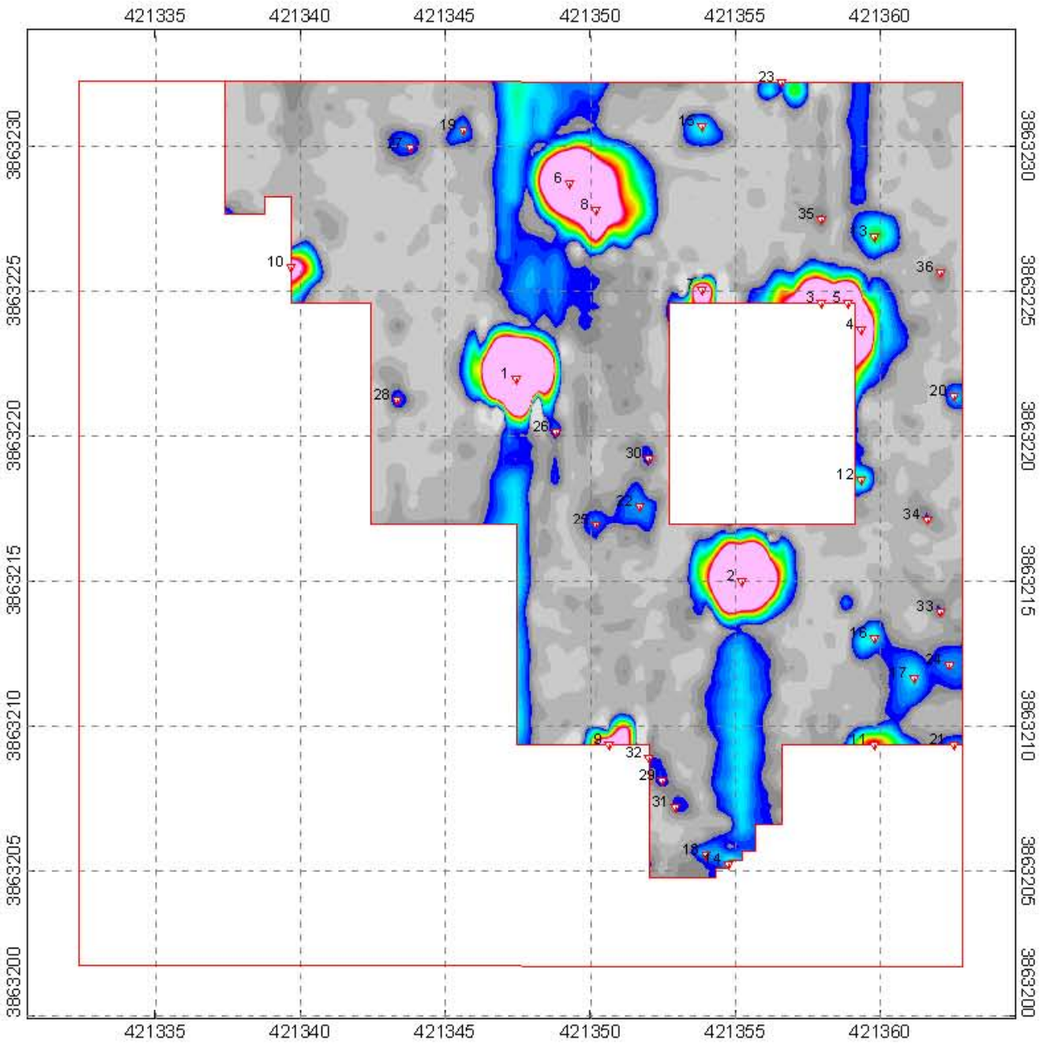
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

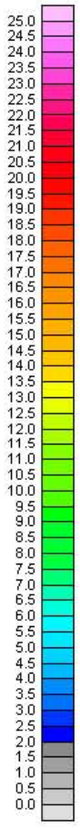
Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	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)	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
L-16_C1	421347.4552	3863221.998	49.5	66.5		619	L-16_1	12/02/04	25		0	0	01/22/05	MD	0.25	3 x 0.75	M15 grenade - grenade burster O/E scrap	-12	0			4	4.25		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
L-16_C12	421359.3372	3863218.491	88.5	55		9	L-16_12	12/02/04	11		0	0	01/22/05	GEO	20	12 x 12	Rock	0	-6			4	8		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
L-16_C13	421359.7965	3863226.87	90	82.5		9	L-16_13	12/02/04	64		0	0	01/22/05	GEO	0.25	0.5 x 0.5	Geo rocks					2	2		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
L-16_C15	421353.856	3863230.68	70.5	95		7	L-16_29	12/02/04			0	0	01/22/05	CD	0.5	2 x 2 x 1	Slag					2	2		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
L-16_C16	421359.7928	3863213.006	90	37		7		12/02/04	23		0	0	01/22/05	MD	0.5	4 x 3	M15 grenade	-12.72984	-12.72984			3	3.5		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
L-16_C19	421345.6293	3863230.53	43.5	94.5		5	L-16_20	12/02/04			0	0	01/22/05	CD	0.5	3 x 3 x 0.25	Hinge	0	-10			1	1.5		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
L-16_C20	421362.5373	3863221.385	99	64.5		5	L-16_42	12/02/04	13		0	0	01/22/05	GEO	0.25	1.5 x 1	Geo rocks					2	2.25		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
L-16_C22	421351.7197	3863217.579	63.5	52		4	L-16_16	12/02/04	48		0	0	01/22/05	GEO	0.25	0.25 x 0.25	Geo rock					1	1		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
L-16_C23	421356.5987	3863232.203	79.5	100		4	M-16_7	12/02/04			0	0		MD	10	24 x 24 x 12	M15 grenades - 29 pieces O/E scrap pit								01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
L-16_C25	421350.196	3863216.97	58.5	50		4	L-16_17	12/02/04	45		0	0	01/22/05	CD	0.25	4	Old nail	-1.414427	1.4144272			3	3		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
L-16_C26	421348.8258	3863220.169	54	60.5		3		12/02/04	13		0	0	01/22/05	CD	0.25	1	Bottle cap					1	1		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
L-16_C27	421343.801	3863229.921	37.5	92.5		3	L-16_39	12/02/04	104		0	0	01/22/05	GEO	0.5	0.5 x 0.5	Geo rock/soil					0	6		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
L-16_C30	421352.0248	3863219.255	64.5	57.5		3	L-16_30	12/02/04	12		0	0	01/22/05	MD	0.25	3 x 0.5	M15 grenade	0	-3			3	3		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
L-16_C33	421362.0782	3863213.92	97.5	40		2		12/02/04	24		0	0	01/22/05	CD	1	6 x 0.25	(2) old nails	5.6577086	-5.657709			4	8		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
L-16_C35	421357.9685	3863227.48	84	84.5		2		12/02/04	8		0	0	01/22/05	GEO	0.25	0.25 x 0.25	Geo rock	-6	0			1	1		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	02/21/06
L-16_C36	421362.0814	3863225.65	97.5	78.5		2	L-16_47	12/02/04	17		0	0	01/22/05	MD	0.5	4 x 2	M15 grenade - additional bike pedal	-6	0			9	9		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
L-16_C7	421353.8545	3863225.043	70.5	76.5		72	L-16_7	12/02/04	30		0	0	01/22/05	GEO	0.25	2 x 1	Geo rock	8	0			3	3		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005

* 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

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

Scale 1:180

2.5 0 2.5 5 7.5 10

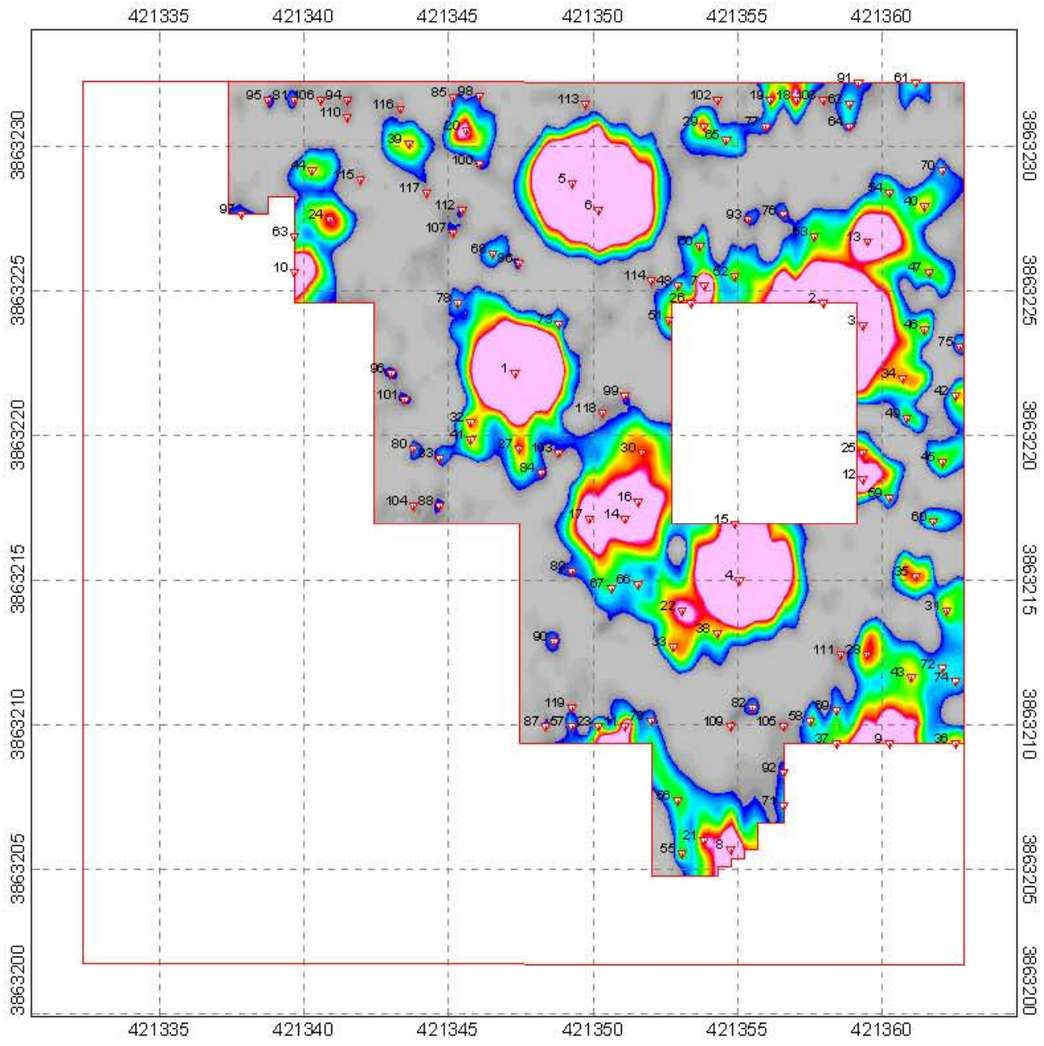
metres

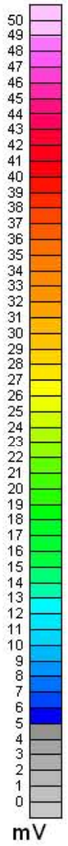
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid L-16
Camp Croft, South Carolina

Date of Survey: December 2, 2004





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)

Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid L-16
Camp Croft, South Carolina

Date of Survey: December 2, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

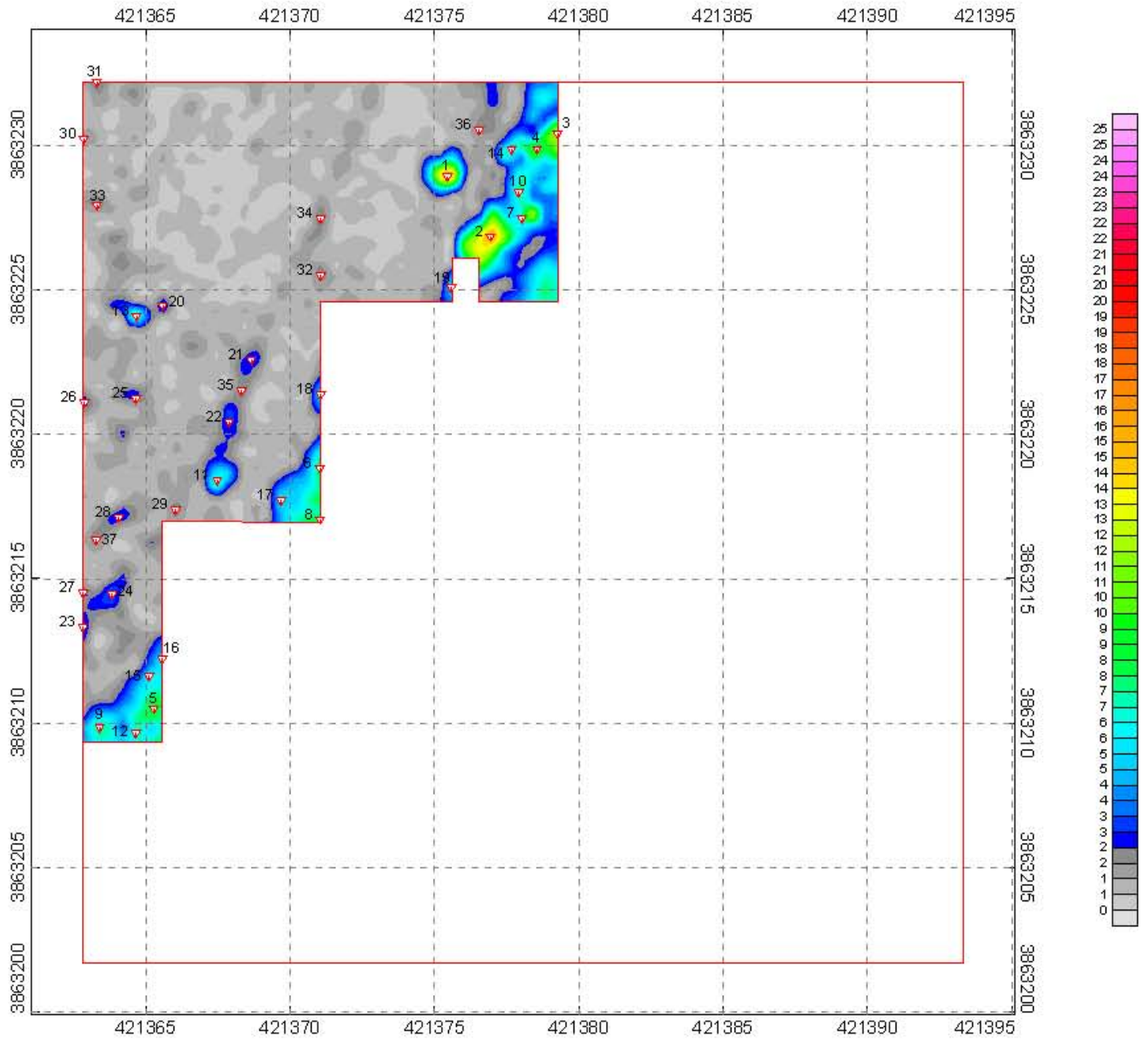
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: L17
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
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)	Chi^2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs)	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
L-17_C1	421375.4501	3863228.911	41.3731	89.2138		15	L-17_2	12/03/04	141		0	0	01/22/05	CD			Rebar - buried 4' unable to move. Per QC, left in target					4	2		01/25/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
L-17_C13	421364.6786	3863224.103	6.0255	73.4244		7	L-17_16	12/03/04	35		0	0	01/22/05	GEO	0.25	1 x 0.5	Geo rock	-5.657709	-5.657709			3	3		01/25/05	DRG	Yes	HEL	01/26/05	NO	AJP	3/5/2005
L-17_C21	421368.6614	3863222.587	19.0983	68.4505		3	L-17_49	12/03/04	3		0	0	01/22/05	CD			Coax cable	8	0			1	1		01/25/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
L-17_C22	421367.8889	3863220.411	16.5647	61.3104		3	L-17_46	12/03/04	2		0	0	01/22/05	CD			Coax cable	6	0			2	2		01/25/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
L-17_C25	421364.6701	3863221.232	6	64		3	L-17_42	12/03/04	14		0	0	01/22/05	GEO		1 x 0.5	Geo rock					2	2		01/25/05	DRG	Yes	HEL	01/26/05	NO	AJP	3/5/2005
L-17_C26	421362.8737	3863221.097	0.1044	63.5559		3	L-17_21	12/03/04	14		0	0	01/22/05	MD	0.5	4 x 3	M15 grenade - grenade body	0	-14			6	6		01/25/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
L-17_C28	421364.0737	3863217.129	4.0462	50.5339		2		12/03/04	4		0	0	01/22/05	MD	0.5	4 x 2	M15 grenade - grenade body - O/E scrap					3	3		01/25/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
L-17_C31	421363.3019	3863232.201	1.5	100		2	M-17_75	12/03/04	2		0	0	01/22/05	GEO	0.25	0.5 x 0.5 x 0.5	Geo rock	-4.243281	-4.243281			1	1		01/25/05	DRG	Yes	HEL	01/26/05	NO	AJP	3/5/2005
L-17_C32	421371.0698	3863225.496	27	78		2		12/03/04	3		0	0	01/22/05	GEO	0.25	0.5 x 0.5 x 0.5	Geo rock					1	1		01/25/05	DRG	Yes	HEL	01/26/05	NO	AJP	3/5/2005
L-17_C34	421371.0703	3863227.476	27	84.5		2	L-17_58	12/03/04	4		0	0	01/22/05	GEO	0.25	0.5 x 0.25	Geo rock	0	6			1	1		01/25/05	DRG	Yes	HEL	01/26/05	NO	AJP	3/5/2005
L-17_C35	421368.3265	3863221.535	18	65		2		12/03/04	2		0	0	01/22/05	CD			Coax cable	6	0			2	2		01/25/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
L-17_C37	421363.2977	3863216.357	1.5	48		2	L-17_20	12/03/04	13		0	0	01/22/05	MD	0.5	4 x 2	M15 grenade - grenade body - O/E scrap					0.5	1		01/25/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005

* 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)

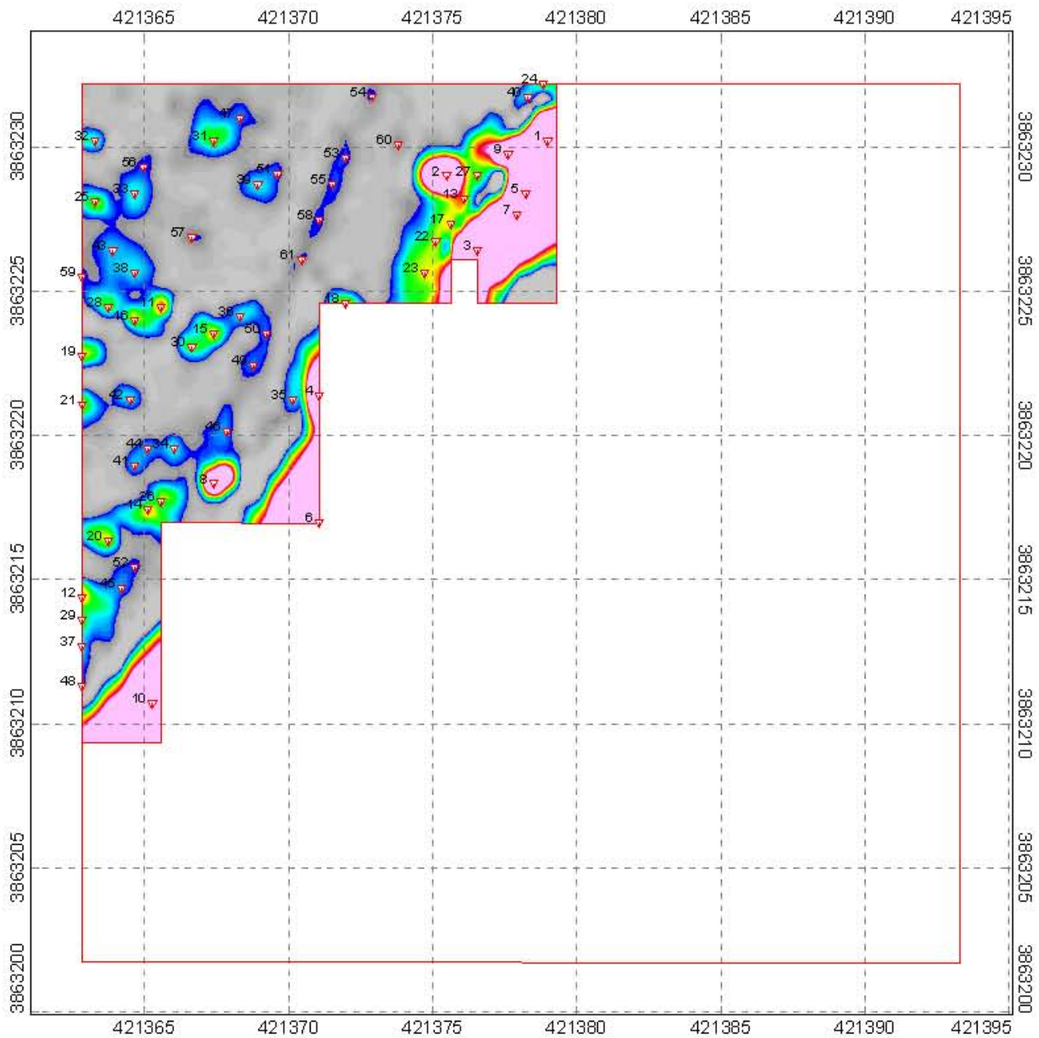
Scale 1:180

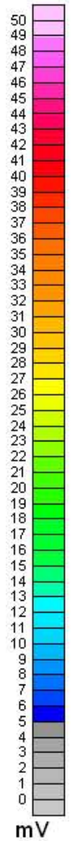
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid L-17
Camp Croft, South Carolina

Date of Survey: December 3, 2004



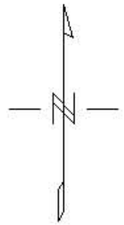


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

2.5 0 2.5 5 7.5 10

metres

NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid L-17
Camp Croft, South Carolina

Date of Survey: December 3, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

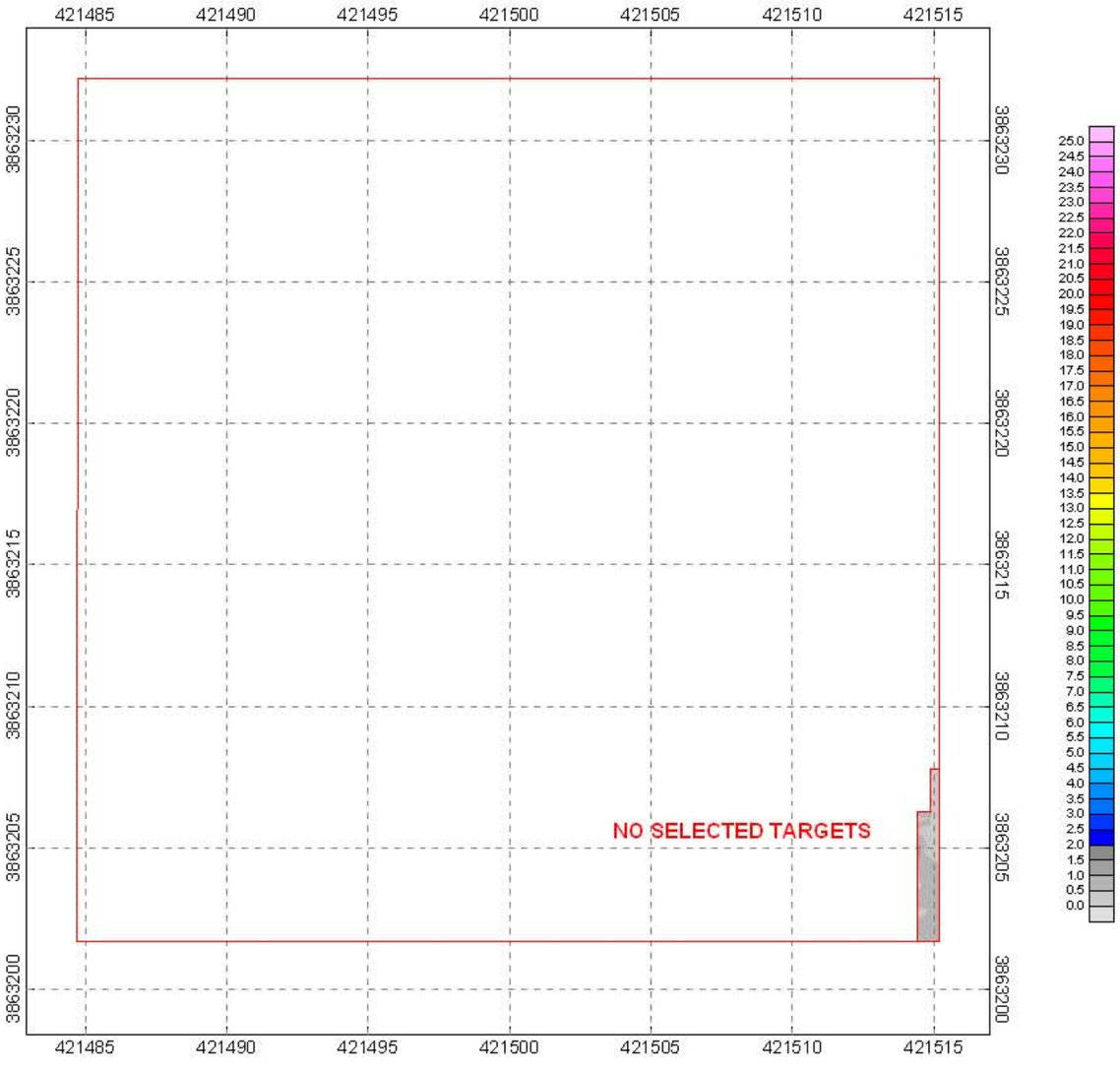
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: L21
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
L-21_1	421514.4223	3863204.738	97.5	10	5.0			11/30/04			0	0		CD		0.166 x 14	Wire	8.4865629	-8.486563			0	2		01/31/05	RLF	Yes	HEL	02/01/05	YES	AJP	3/5/2005

* 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)

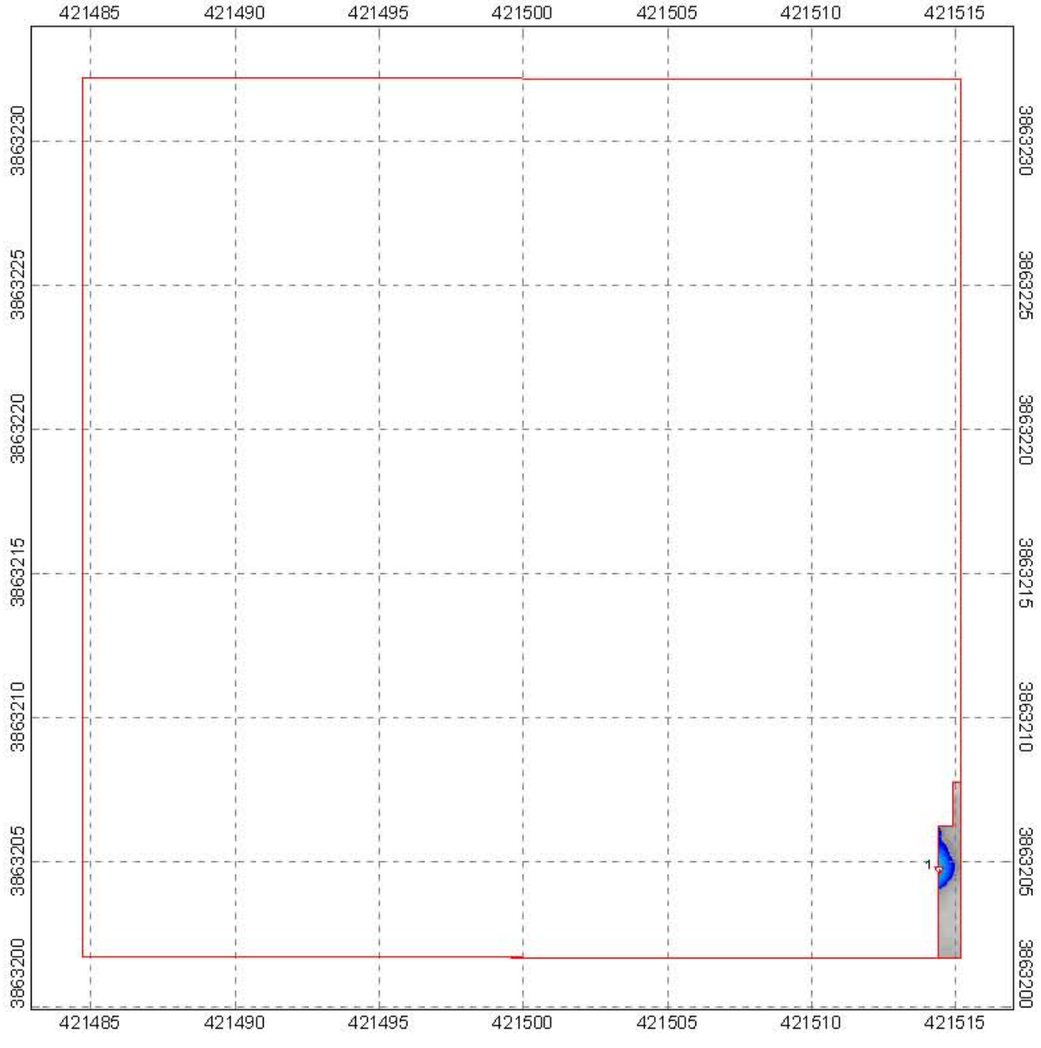
Scale 1:180

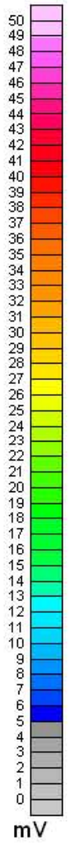
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid L-21
Camp Croft, South Carolina

Date of Survey: November 30, 2004





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)

Scale 1:180

2.5 0 2.5 5 7.5 10

metres

NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK1 SUM Ch1, Ch2 & Ch3
Grid L-21
Camp Croft, South Carolina

Date of Survey: November 30, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: L22
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
L-22_19	421535.1052	3863221.387	65.3668	64.6608	15.0			11/29/04			0	0		NC			target under cart path							L22_19 - #045	1/18/06	barn	NA	DRA	02/22/06	NA	DRA	02/22/06
L-22_21	421536.516	3863217.986	70	53.5	14.0			11/29/04			0	0		CD	.25	.75 x .50 x .50	small piece of steel, Rusted	0	0	NA	0	3	3	L22_21 - #015	1/23/06	barn	YES	TF	01/25/06	YES	RVW	01/25/06
L-22_22	421545.3383	3863226.083	98.9477	80.0813	13.0			11/29/04			0	0		CD	.25	3 x .5 x .5	piece of steel between this target and I22-69, shared with L22-69, Rusted	0	-10	NE	15	4	4	L22_22 - #010	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
L-22_23	421521.589	3863228.807	21	89	12.0			11/29/04			0	0		CD	.5	2 x 2 x 1	3ea pieces of metal, Rusted	0	0	NA	0	4	4	L22_23 - #003	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
L-22_25	421533.6188	3863208.237	60.5	21.5	13.0			11/29/04			0	0		NC			CART PATH							NO PHOTO	1/30/06	SFR	NA	DRA	02/22/06	NA	DRA	02/22/06
L-22_26	421520.9793	3863227.893	19	86	12.0			11/29/04			0	0		CD	.25	6 x .25 x .25	large nail, Rusted	0	0	NA	90	0	3	L22_26 - #005	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
L-22_27	421541.3927	3863224.079	86	73.5	12.0			11/29/04			0	0		CD	.5	8 x .25 x .25	1ea large bolt, Rusted	0	0	E	15	4	4	L22_27 - #011	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
L-22_29	421538.4965	3863217.833	76.5	53	13.0			11/29/04			0	0		CD	.25	3 x .25 x .25	nail, Rusted	0	0	NA	0	4	4	L22_29 - #013	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
L-22_32	421522.0449	3863224.541	22.5	75	9.0			11/29/04			0	0		CD	.25	4 x .25 x .25	2ea nails, Rusted	0	0	NA	15	2	4	L22_32 - #004	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
L-22_36	421523.4148	3863220.275	27	61	9.0			11/29/04			0	0		MD	.5	3 x .75 x .5	fuze, grenade, hand, M10 series, 3ea fuzes, revisit found 1ea nail, Rusted	0	0	NA	0	6	6	L22_36 - #029/L22_36b - #002	1/25/06	barn	NA	DRA	02/22/06	YES	RVW	
L-22_37	421537.947	3863223.4	74.6917	71.2697	9.0			11/29/04			0	0		CD	.5	7 x .25 x .25	pieces of nail, Rusted	0	0	NA	0	7	8	L22_37 - #025/L22_37a - #025	1/25/06	barn	NA	DRA	02/22/06	YES	RVW	
L-22_38	421532.0971	3863214.636	55.5	42.5	9.0			11/29/04			0	0		CD	.25	8 x .25 x .25	large nail, Rusted	0	0	NE	30	8	11	L22_38 - #047	1/18/06	barn	YES	TF	01/25/06	YES	RVW	01/25/06
L-22_39	421530.9234	3863214.825	51.6478	43.1202	9.0			11/29/04			0	0		CD	.25	5 x .25 x .25	nail, Rusted	-10	6	NA	0	4	4	L22_39 - #030/L22_39b - #044	1/25/06	barn	NA	DRA	02/22/06	YES	RVW	
L-22_40	421531.1829	3863214.179	52.5	41	8.0			11/29/04			0	0		CD	.25	4 x .25 x .25	nail, Rusted	0	0	E	0	5	5	L22_40 - #048	1/18/06	barn	YES	TF	01/25/06	YES	RVW	01/25/06
L-22_46	421519.3027	3863224.999	13.5	76.5	6.0			11/29/04			0	0		CD	.25	4 x .25 x .25	nail, Rusted	0	0	NE	0	3	3	L22_46 - #028/L22_46b - #023	1/25/06	barn	NA	DRA	02/22/06	YES	RVW	
L-22_54	421536.6696	3863222.709	70.5	69	8.0			11/29/04			0	0		NC			target under cart path,							L22_54 - #046	1/18/06	barn	NA	DRA	02/22/06	NA	DRA	02/22/06
L-22_69	421544.5926	3863226.211	96.5	80.5	5.0			11/29/04			0	0		CD	.25	3 x .5 x .5	piece of steel, shared with I22-22, Rusted	0	10	NE	15	4	4	L22_69 - #010	1/23/06	barn	YES	TF	01/25/06	YES	RVW	01/25/06
L-22_90	421517.0148	3863214.64	6	42.5	4.0			11/29/04			0	0		NC			checked with em-61 still nc,								1/23/06	barn	YES	TF	01/25/06	NA	DRA	02/22/06
L-22_C1	421518.0811	3863214.03	9.5	40.5		18	L-22_1	11/29/04			0	0		CD		0.5 x 48	Metal rod					0			01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-22_C12	421533.0114	3863215.55	58.5	45.5		4		11/29/04			0	0		CD		0.125 x 3	Nail					4	4		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-22_C13	421519.7609	3863229.112	15	90		4		11/29/04			0	0		CD		0.125 x 3	Nail	0	-12			2	2		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-22_C14	421522.653	3863219.97	24.5	60		4	L-22_11	11/29/04			0	0		CD		0.25 x 6	Nail/spike	-4	0			3	3		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-22_C15	421522.8071	3863226.369	25	81		3	L-22_16	11/29/04			0	0		CD		0.25 x 10	Metal rod/ring	-2.121641	-2.121641			0			01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-22_C16	421536.668	3863216.768	70.5	49.5		3	L-22_20	11/29/04			0	0		MD	2	5 x 2.75 x 2.75	grenade, hand, prac, MK2, also found 5ea nails at 14 to 18 inches, Complete, Rusted	-18	-12	W	0	25	26.5	L22_C16 - #024/L22_C16b - #014	1/25/06	barn	NA	DRA	02/22/06	YES	RVW	
L-22_C16	421536.668	3863216.768	70.5	49.5		3	L-22_20	11/29/04			0	0		GEO			Hot rocks	0	-6			4	4		01/31/05	RW	NA	DRA	02/22/06	NO	AJP	3/5/2005
L-22_C17	421529.8086	3863202.51	48	2.7		3		11/29/04			0	0		CD		0.125 x 2	Ring (3)	-5.657709	-5.657709			3	3		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-22_C18	421522.9579	3863220.58	25.5	62		3	L-22_24	11/29/04			0	0		CD		0.25 x 5	Nail/spike	0	6			3	4		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-22_C19	421530.7228	3863202.753	51	3.5		3	L-22_52	11/29/04			0	0		CD		0.5 x 3	Nail	0	12			3	3		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-22_C20	421538.4962	3863216.919	76.5	50		3	L-22_30	11/29/04			0	0		CD		0.25 x 6	Nail/spike	-4.243281	-4.243281			3	3		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-22_C21	421521.5853	3863215.096	21	44		3	L-22_42	11/29/04			0	0		MD	.25	.3 x .75 x .5	fuze, grenade, hand, M10 series, Fuze, Rusted	0	0	S	0	9	9	L22_C21 - #001	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
L-22_C21	421521.5853	3863215.096	21	44		3	L-22_42	11/29/04			0	0		GEO			Hot rock	-25.45969	-25.45969			6	6		01/31/05	RW	NA	DRA	02/22/06	NO	AJP	3/5/2005
L-22_C22	421523.1096	3863218.295	26	54.5		3		11/29/04			0	0		CD		0.125 x 2	Ring	-1.06082	1.0608204			2			01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-22_C23	421539.8676	3863217.833	81	53		3		11/29/04			0	0		CD	.25	3 x .25 x .25	nail, Rusted	0	0	NA	0	3	3	L22_C23 - #012	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
L-22_C23	421539.8676	3863217.833	81	53		3		11/29/04			0	0		GEO			Hot rock	0	-6			2	2+		01/31/05	RW	NA	DRA	02/22/06	NO	AJP	3/5/2005
L-22_C25	421522.0419	3863213.267	22.5	38		3	L-22_77	11/29/04			0	0		CD		0.125 x 2	Nail	-18	0			1	1		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-22_C26	421521.1284	3863215.553	19.5	45.5		3	L-22_42	11/29/04			0	0		CD		0.25 x 3 x 2	Metal piece					2	3		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-22_C28	421533.9271	3863221.643	61.5	65.5		2	L-22_53	11/29/04			0	0		CD		0.125 x 3	Nail	-16.97313	16.973126			0	0		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-22_C29	421515.6427	3863211.136	1.5	31		2	L-22_102	11/29/04			0	0		CD		0.125 x 2	Metal ring	6	0			1	1		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-22_C3	421528.8947	3863203.211	45	5		12	L-22_13	11/29/04			0	0		MD	1	0.5 x 5	26 grenade fuzes - expended					5	7		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-22_C30	421543.9827	3863224.383	94.5	74.5		2	L-22_84	11/29/04			0	0		CD		0.125	Wire - LIP	-24	0			8	8		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

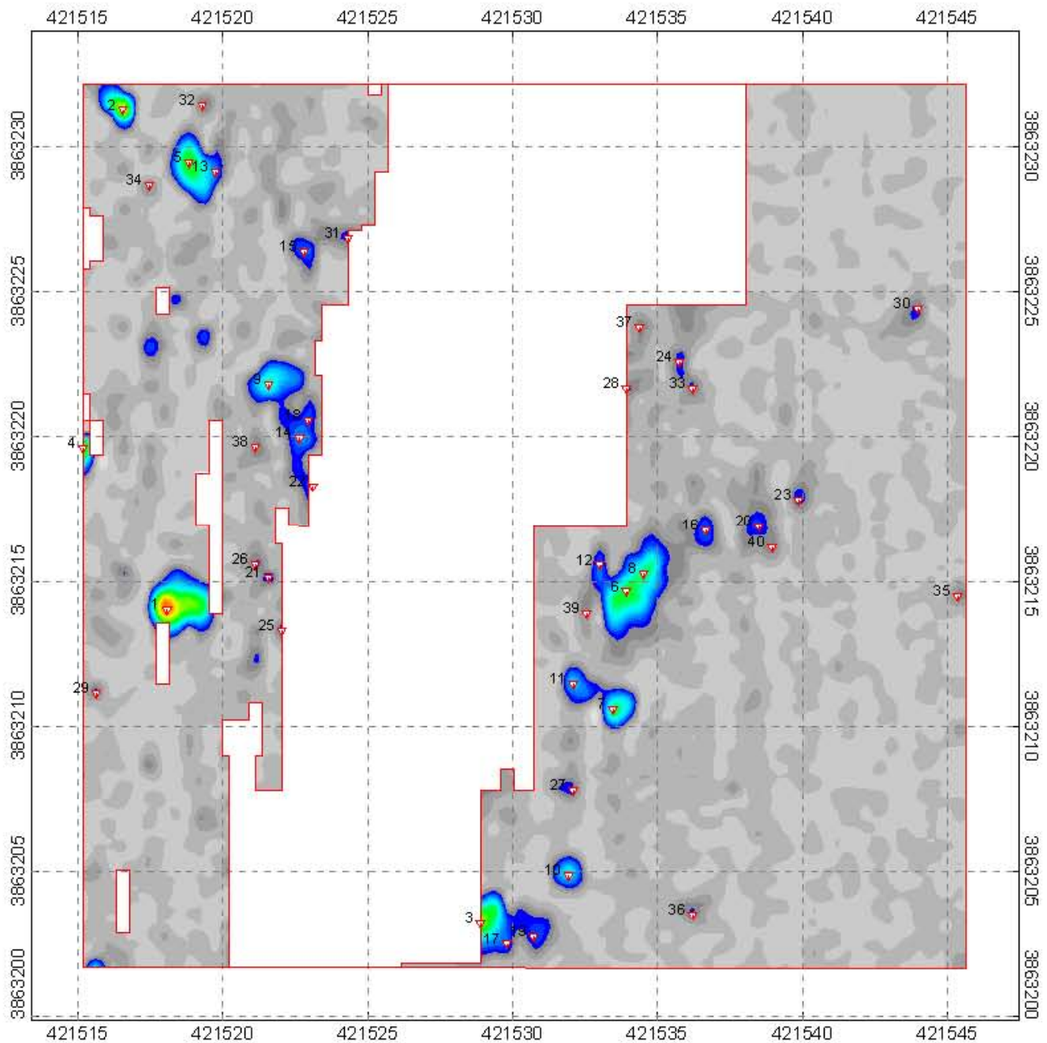
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: L22
Field Book ID:

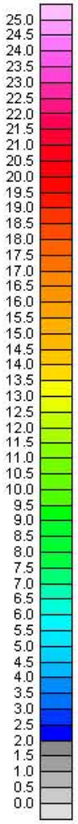
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
L-22_C31	421524.3307	3863226.826	30	82.5		2	L-22_14	11/29/04			0	0		CD	.25	4 x .25 x .25	nail, Rusted	0	0	NA	90	0	2	L22_C31 - #006	1/23/06	bam	YES	TF	01/25/06	YES	RVW	01/25/06
L-22_C31	421524.3307	3863226.826	30	82.5		2	L-22_14	11/29/04			0	0		GEO			Hot rock	6	0			0	0+		01/31/05	RW	NA	DRA	02/22/06	NO	AJP	3/5/2005
L-22_C36	421536.2074	3863203.514	69	6		2	L-22_48	11/29/04			0	0		CD		0.0625 x 1	Banding - LIP	0	2			12	12+		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-22_C37	421534.3847	3863223.776	63	72.5		2	L-22_93	11/29/04			0	0		CD	4	0.25 x 4	Metal rod	0	24			5	5		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-22_C38	421521.1295	3863219.666	19.5	59		2	L-22_113	11/29/04			0	0		CD		0.125 x 2 x 3	Metal chunk	2	0			4	4		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-22_C39	421532.5539	3863213.874	57	40		2	L-22_18	11/29/04			0	0		CD		0.5 x 4	Nail	-18	0			3	4		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-22_C40	421538.9531	3863216.158	78	47.5		2	L-22_28	11/29/04			0	0		CD		0.125 x 4	Nail	5.6577086	5.6577086			6	6		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-22_C9	421521.5871	3863221.799	21	66		7	L-22_10	11/29/04			0	0		CD		0.125 x 2 x 4	Hasp	0	9			0			01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005

* 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)

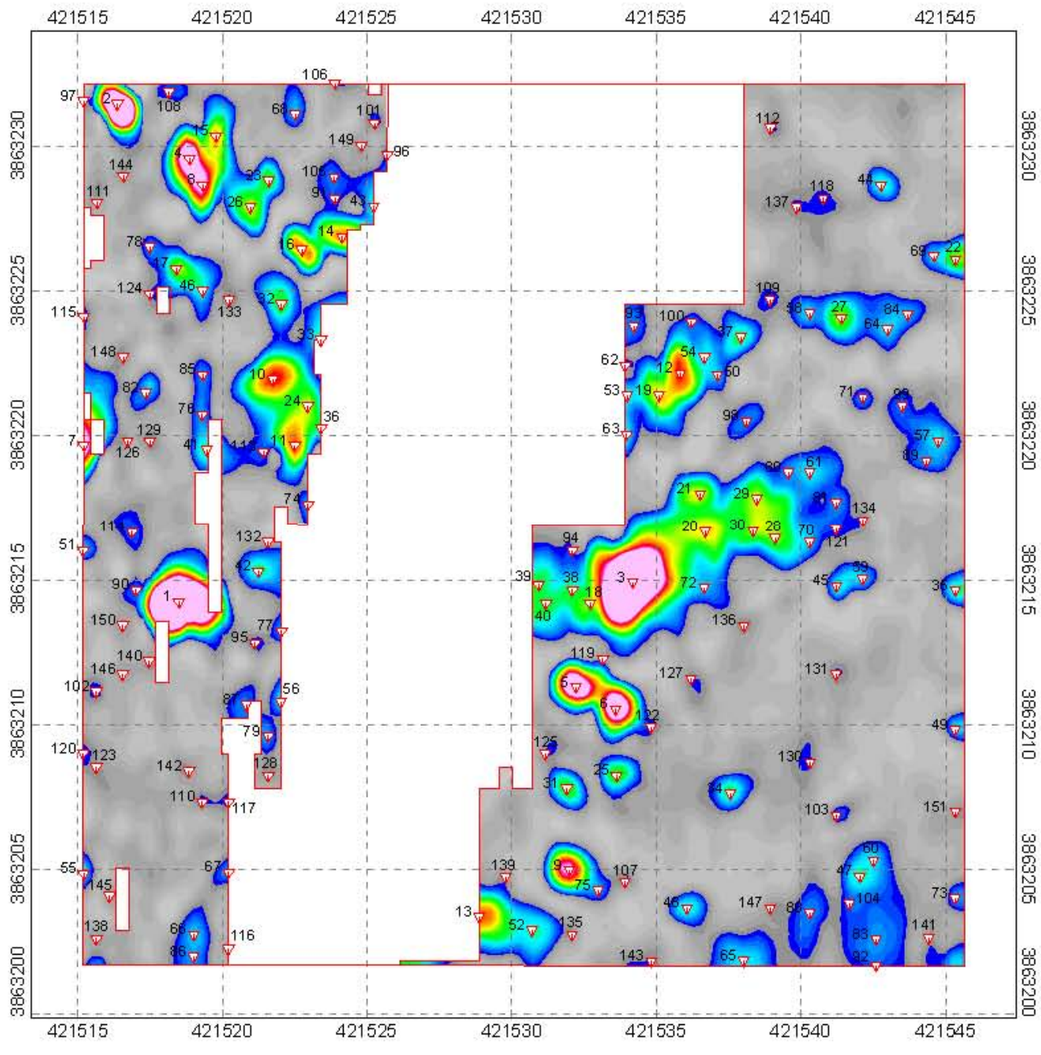
Scale 1:180

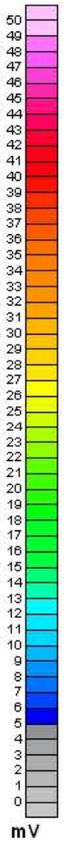
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid L-22
Camp Croft, South Carolina

Date of Survey: November 29, 2004



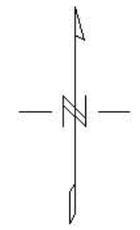


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

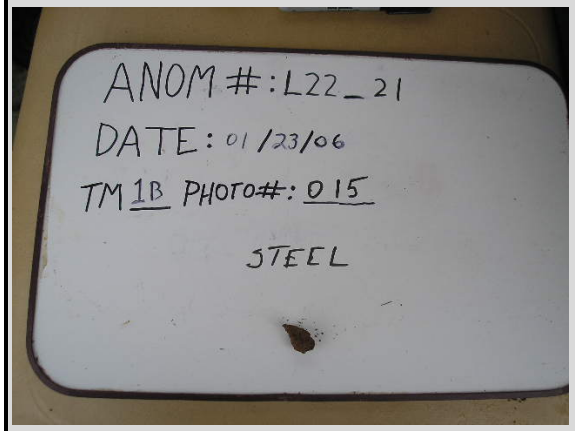
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

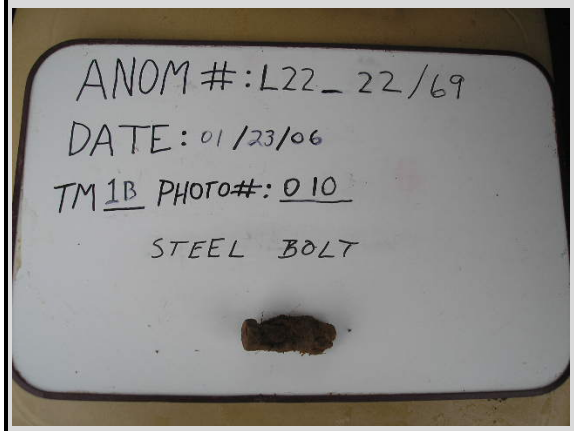
Zapata Engineering

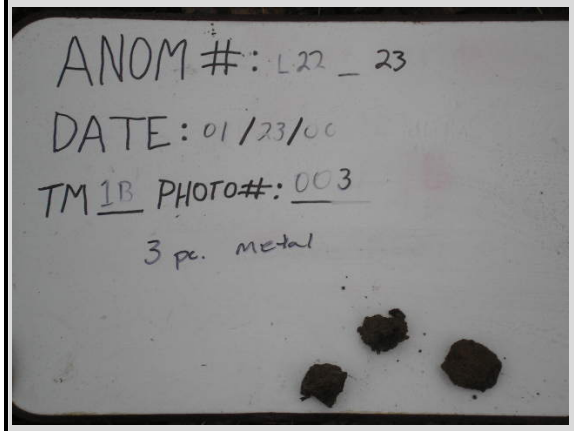
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid L-22
Camp Croft, South Carolina

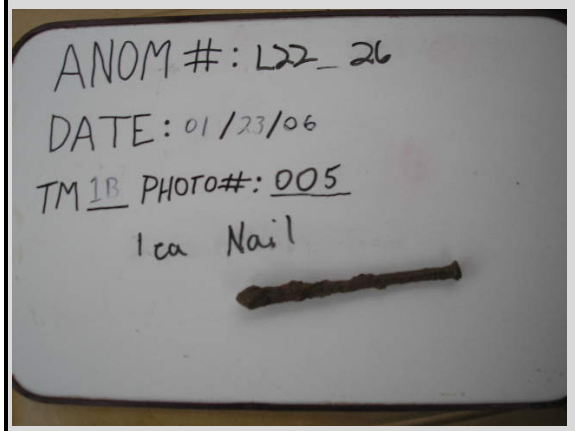
Date(s) of Survey: November 29, 2004

GRID L22 DIG PHOTOS









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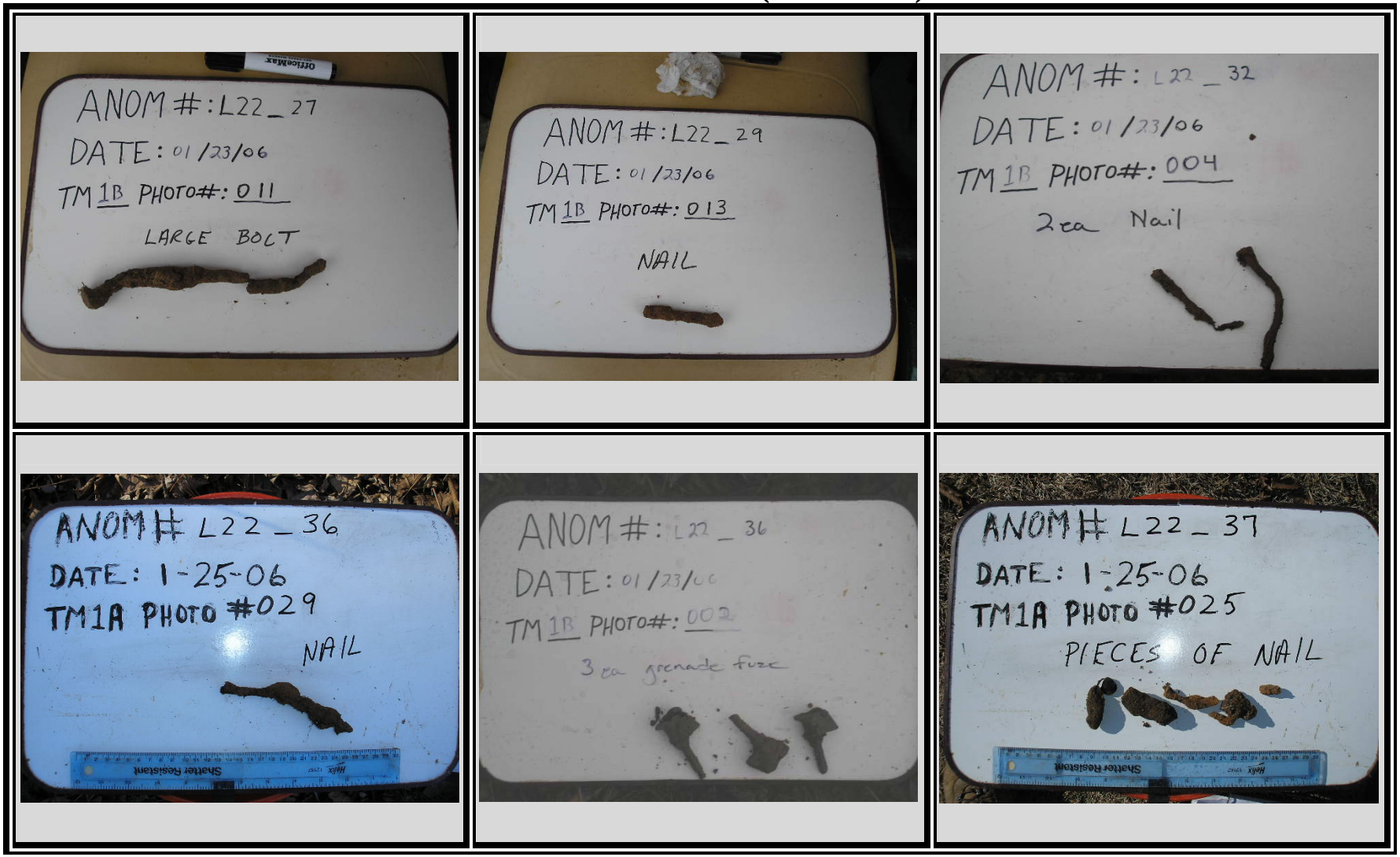

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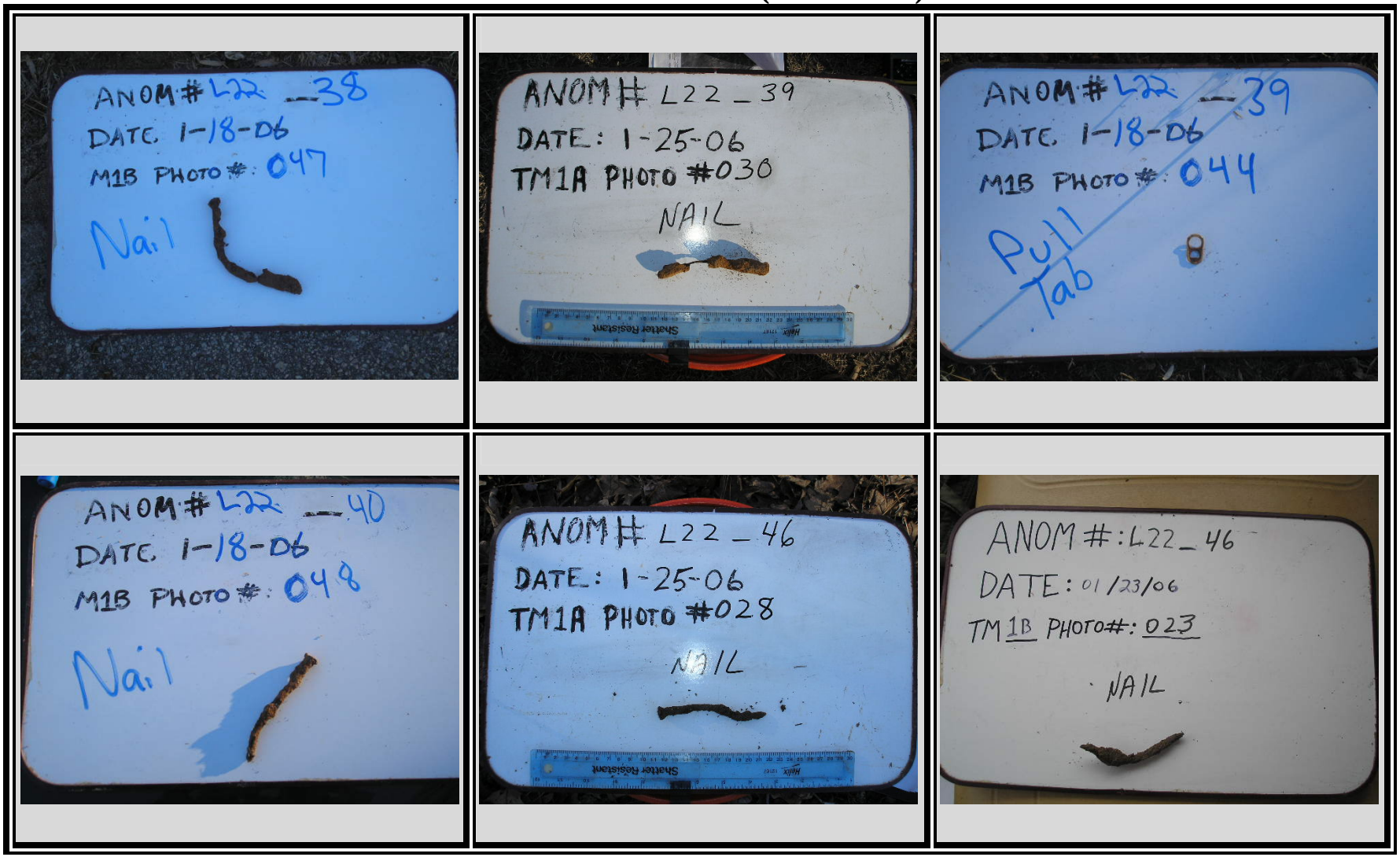

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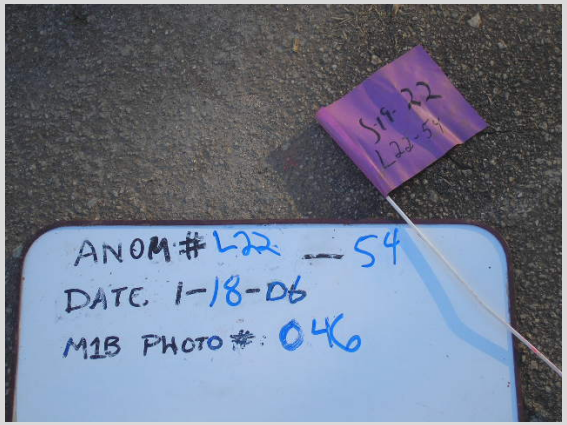
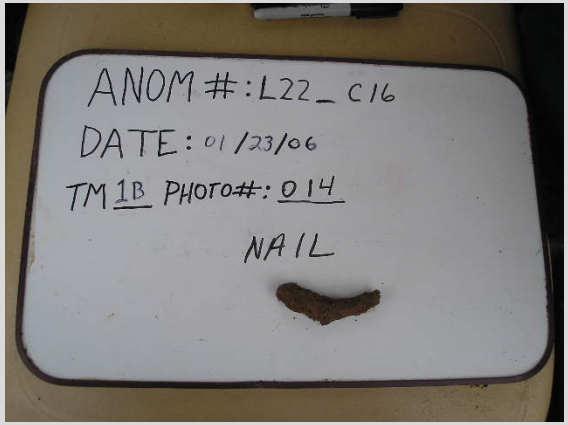
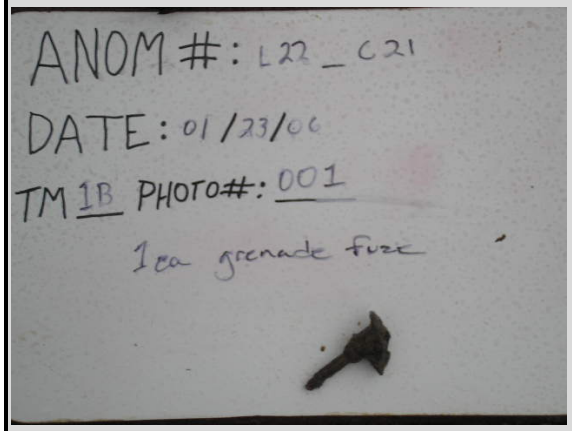
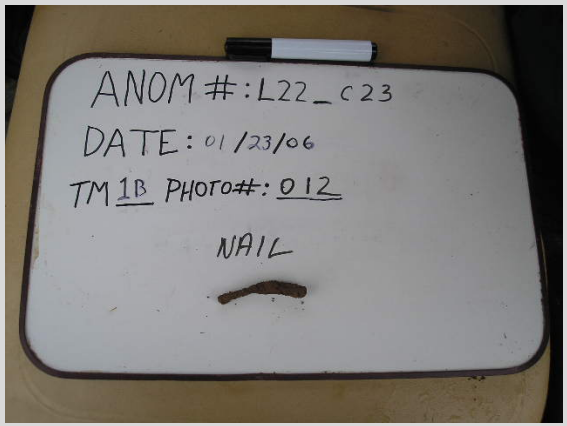
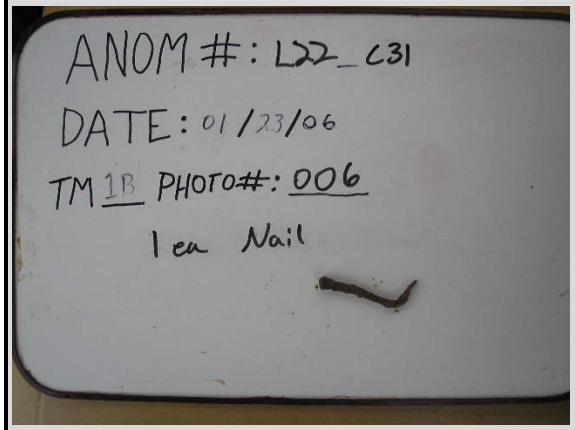










ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: L23
Field Book ID:

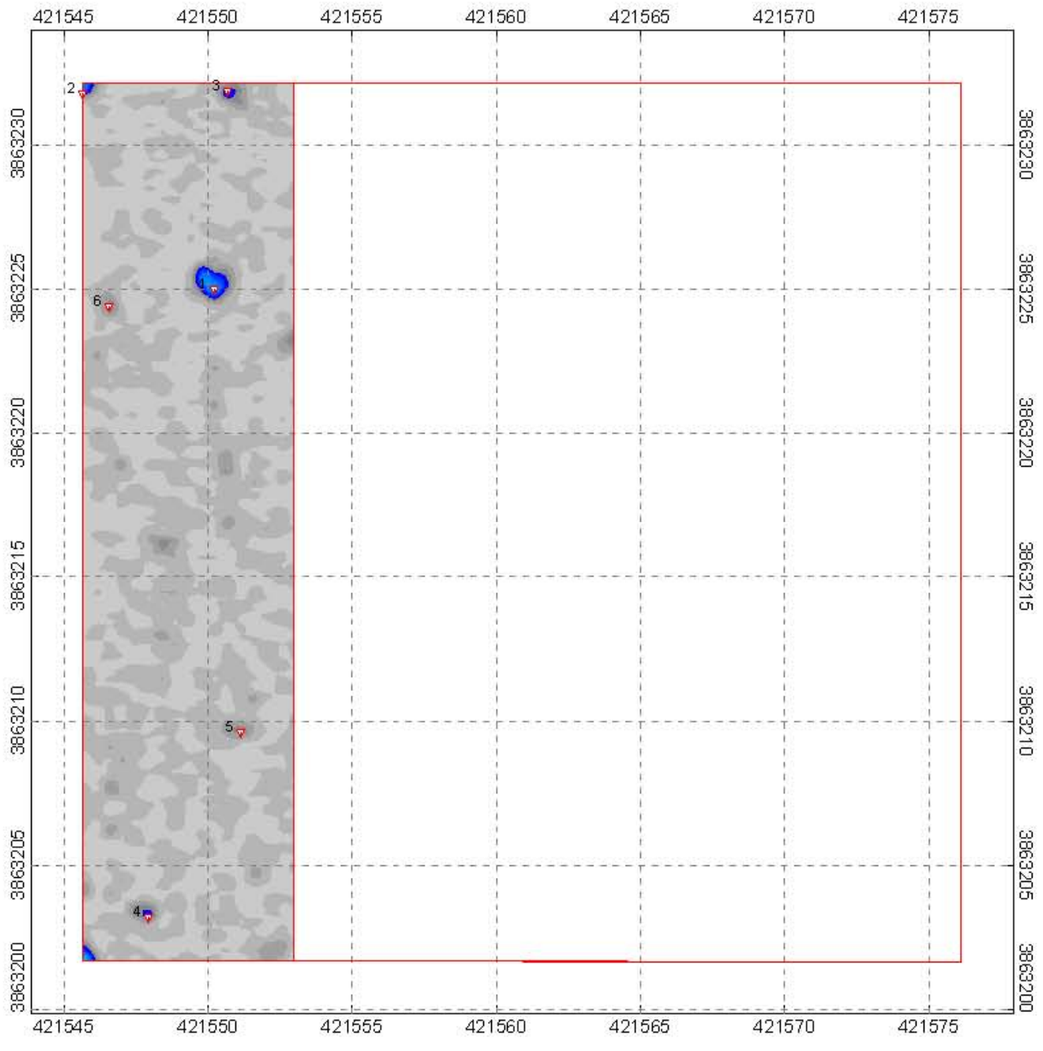
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

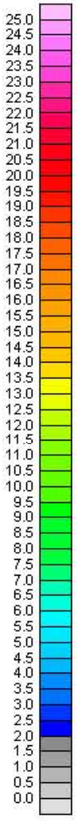
Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results													Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset					Offset				Depth (in)													
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs)	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
L-23_6	421547.481	3863203.511	6	6	14.0			11/30/04			0	0		CD	25	.25 x .25 x .25	.25 of a dime, Oxidized	0	0	NA	0	5	5	L23_6 - #038	1/18/06	bam	YES	TF	01/25/06	YES	RVW	01/25/06
L-23_7	421548.3985	3863216.155	9	47.5	14.0			11/30/04			0	0		CD	25	3 x .25 x .25	nail, Rusted	0	0	NE	75	0	1.5	L23_7 - #036	1/18/06	bam	YES	TF	01/25/06	YES	RVW	01/25/06
L-23_8	421552.051	3863202.138	21	1.5	12.0			11/30/04			0	0		CD	25	3 x .25 x .25	nail, Rusted	0	0	E	15	3	3	L23_8 - #034	1/18/06	bam	YES	TF	01/25/06	YES	RVW	01/25/06
L-23_9	421549.4652	3863217.221	12.5	51	11.0			11/30/04			0	0		CD	25	7 x .25 x .25	large nail, Rusted	0	0	NE	30	7	7	L23_9 - #023/L23_9a - #037	1/25/06	bam	YES	TF	01/25/06	YES	RVW	01/25/06
L-23_C2	421545.6605	3863231.771	0	98.75		4	L-23_4	11/30/04			0	0		CD		0.25 x 6	SW - M22 corner nail	8.4865629	8.4865629			0	6		01/31/05	RW	Yes	HEL	02/01/05	YES	AJP	3/5/2005
L-23_C5	421551.139	3863209.604	18	26		2	L-23_14	11/30/04			0	0		CD	1	0.125 x 2 x 4	Hasp	-6	0			4	4		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
L-23_C6	421546.5726	3863224.382	3	74.5		2	L-23_5	11/30/04			0	0		CD		4	Hot rocks / slat	-6	0			4	4		01/31/05	RW	Yes	HEL	02/01/05	YES	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)

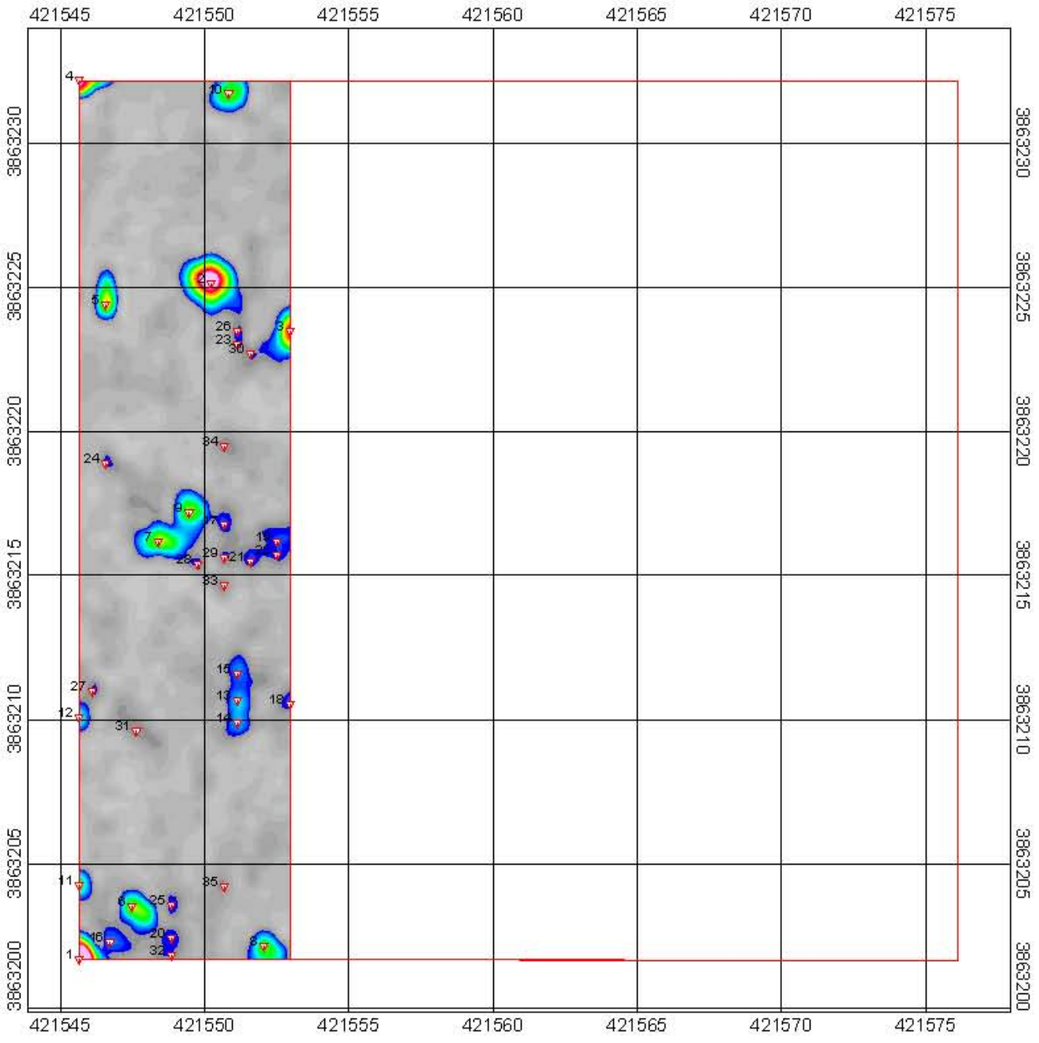
Scale 1:180

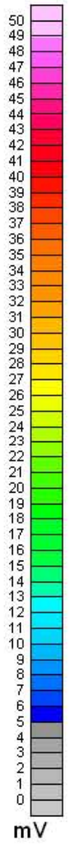
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid L-23
Camp Croft, South Carolina

Date of Survey: November 30, 2004



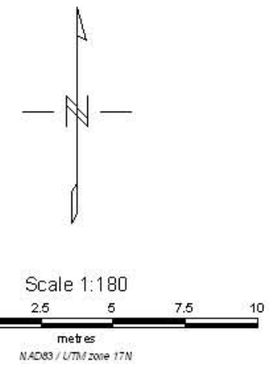


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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

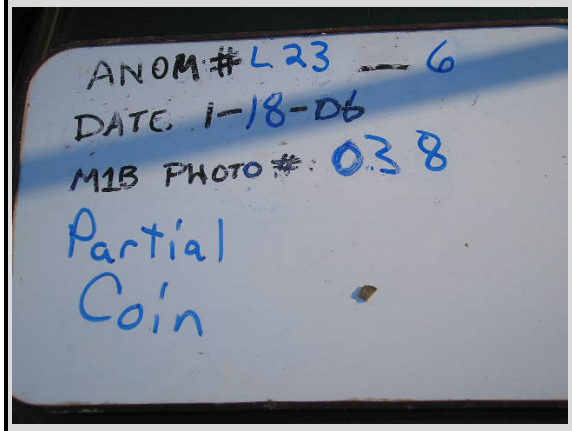


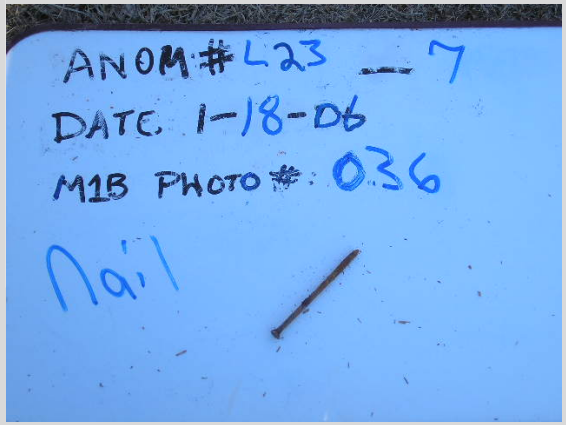
Zapata Engineering

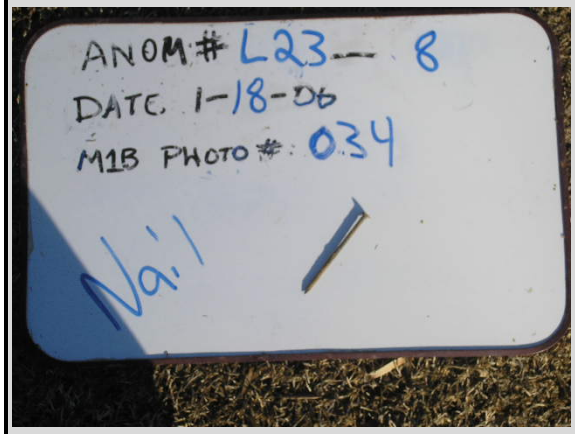
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid L-23
Camp Croft, South Carolina

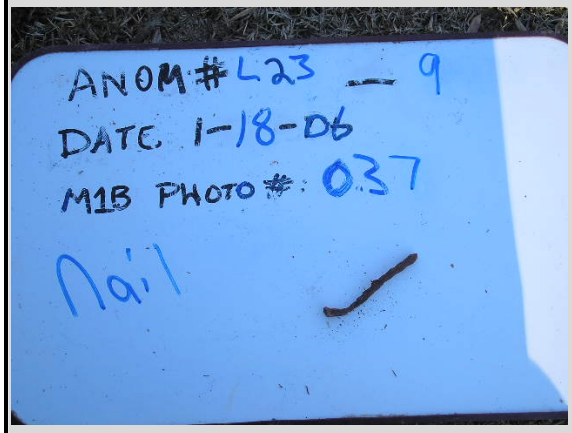
Date of Survey: November 30, 2004

GRID L23 DIG PHOTOS









ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

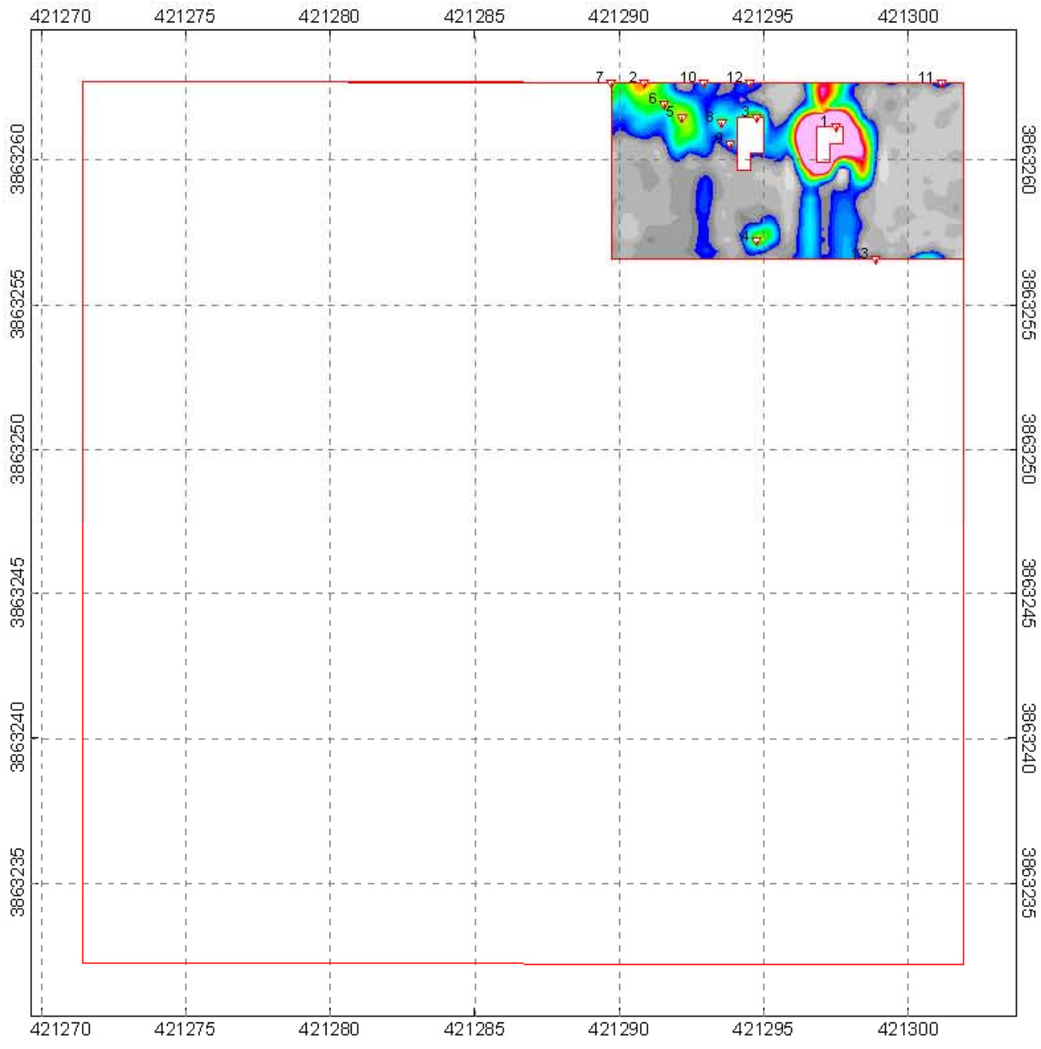
Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

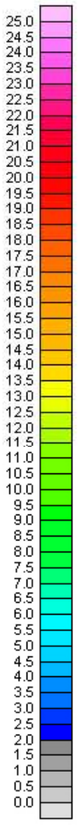
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: M14
Field Book ID: ______________________

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

	Original Survey								Reacquisition Survey					Dig Results													Post-Dig UXO QC Results			Post-Dig Geophysical QC		
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	Offset X Distance (in)	Offset Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs)	Dimensions: Length, Width, Height (in)	Comments	Offset X Distance (in)	Offset Y Distance (in)	Orientation of Nose (Azimuth deg) **	Inclination of Nose (deg) **	Depth (in) Top of Item	Depth (in) 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
No Targets Investigated																																

* 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)

N

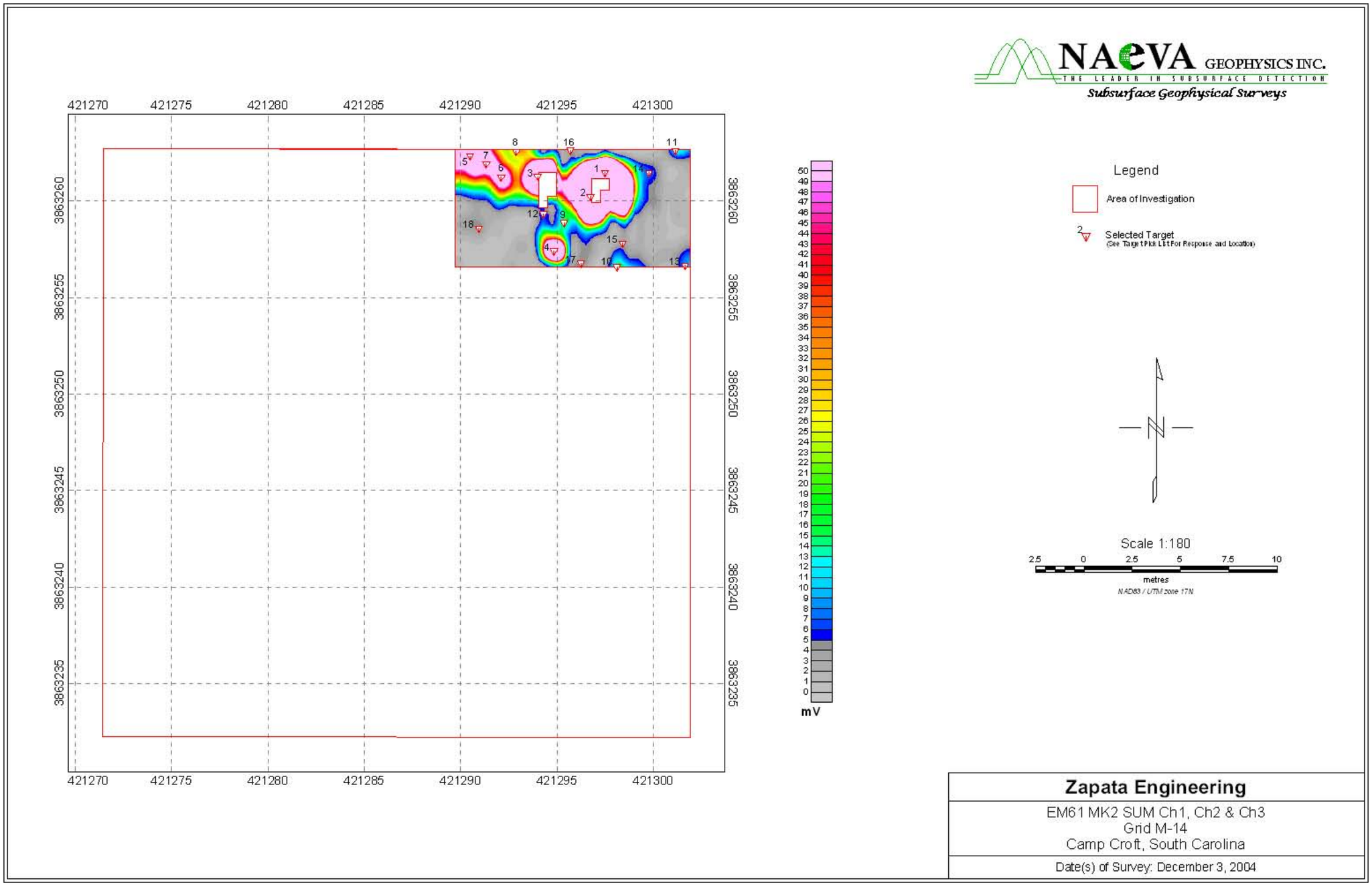
Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid M-14
Camp Croft, South Carolina

Date of Survey: December 3, 2004


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
421270
421275
421280
421285
421290
421295
421300
3863260
3863255
3863250
3863245
3863240
3863235
mV
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Scale 1:180
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid M-14
Camp Croft, South Carolina
Date(s) of Survey: December 3, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

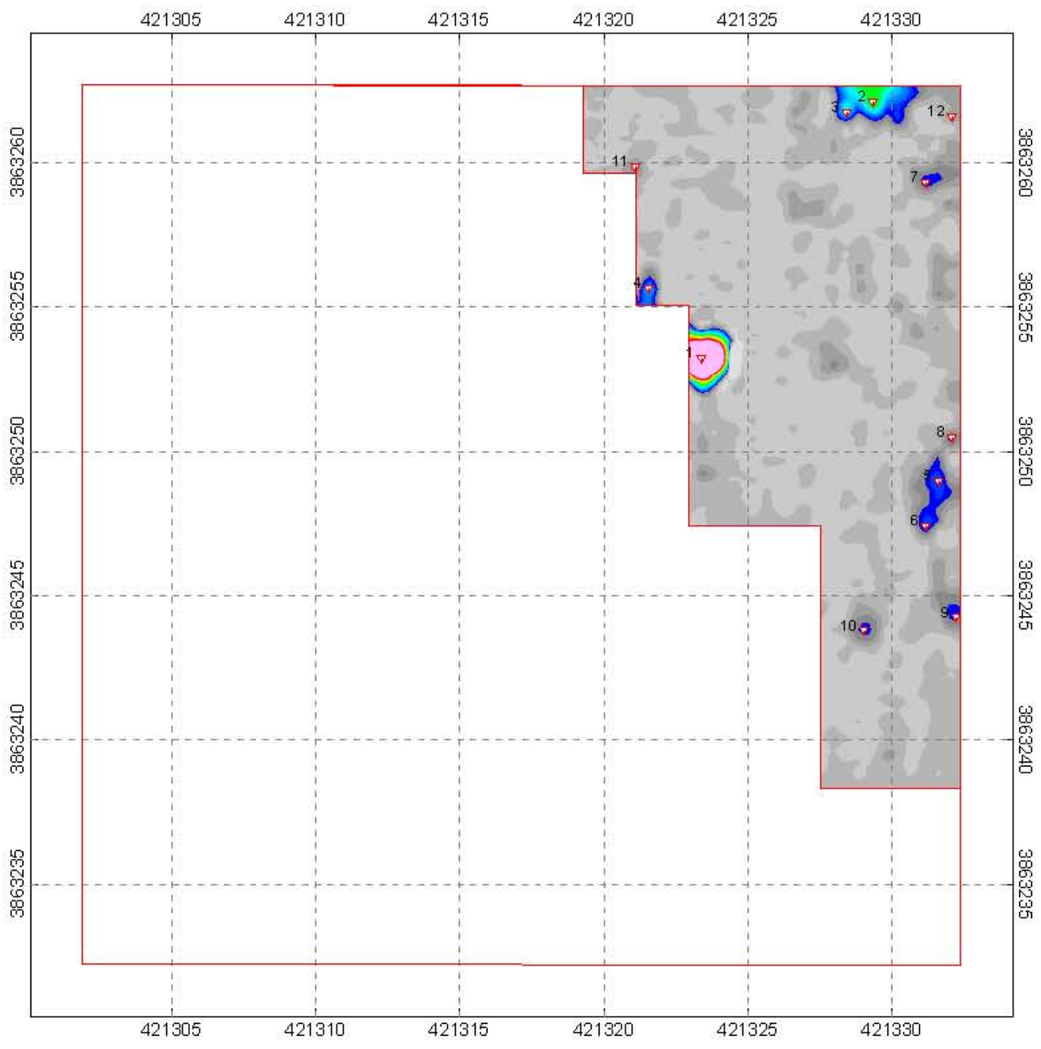
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: M15
Field Book ID:

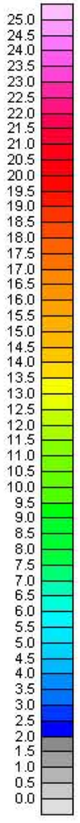
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
M-15_C2	421329.3367	3863262.121	90	98.17		10	M-15_2	12/02/04	28		0	0	01/22/05	CD	0.25	18	Barb wire - LIP	0	-18			6	6+		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-15_C3	421328.4225	3863261.729	87	96.88		7	M-15_7	12/02/04	21		0	0	01/22/05	CD		6	Barb wire - LIP	-18	0			6	6+		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-15_C5.1	421331.6184	3863248.967	97.5	55		3		12/02/04	36		0	0	01/22/05	CD			nail					0	2		01/26/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
M-15_C7	421331.1641	3863259.327	96	89		2	M-15_21	12/02/04	12		0	0	01/22/05	CD			Barb wire - LIP					10	10+		01/26/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005

* 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)

Scale 1:180

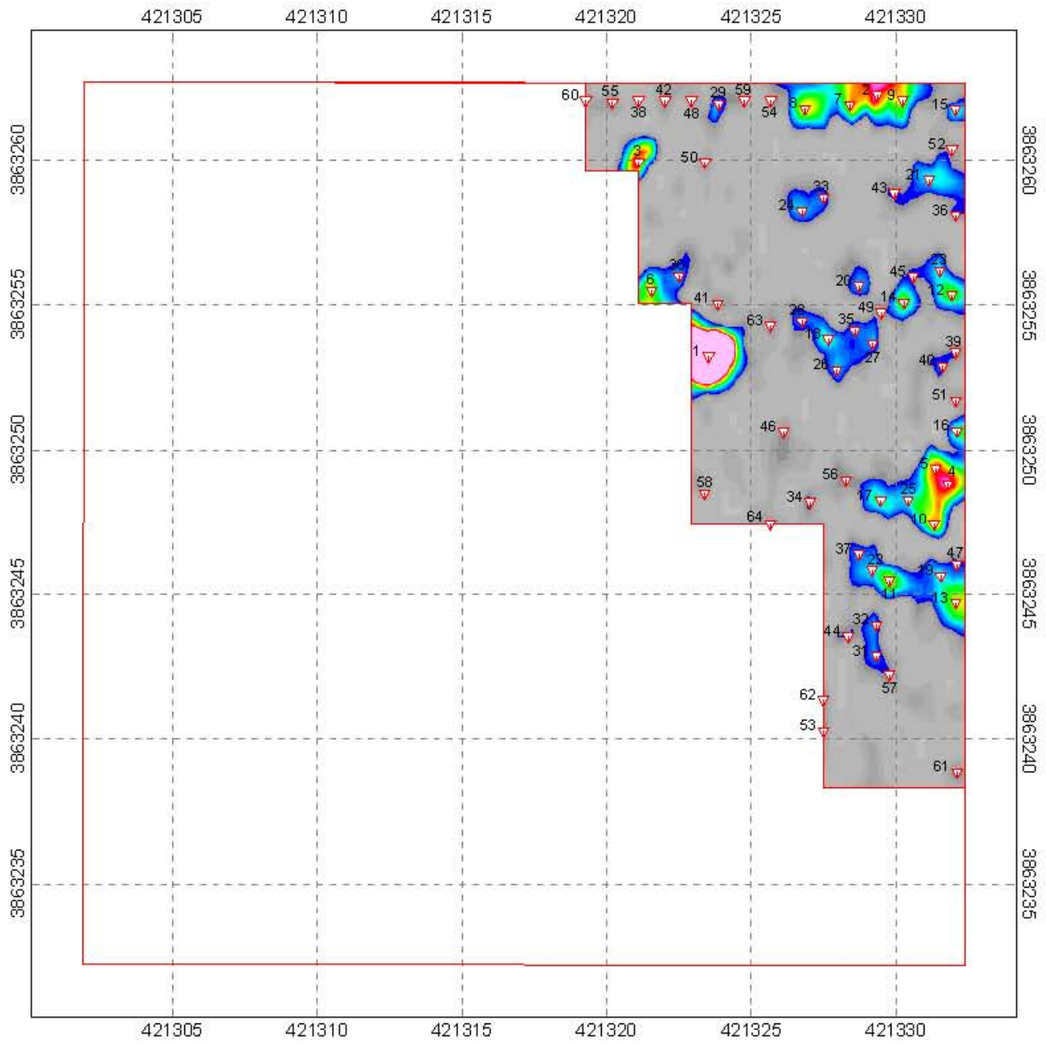
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

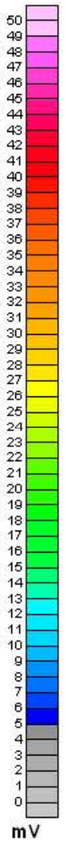
Zapata Engineering

EM61 MK2 Chi2
Grid M-15
Camp Croft, South Carolina

Date of Survey: December 2, 2004

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)

Scale 1:180

2.5 0 2.5 5 7.5 10

metres

NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid M-15
Camp Croft, South Carolina

Date(s) of Survey: December 2, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

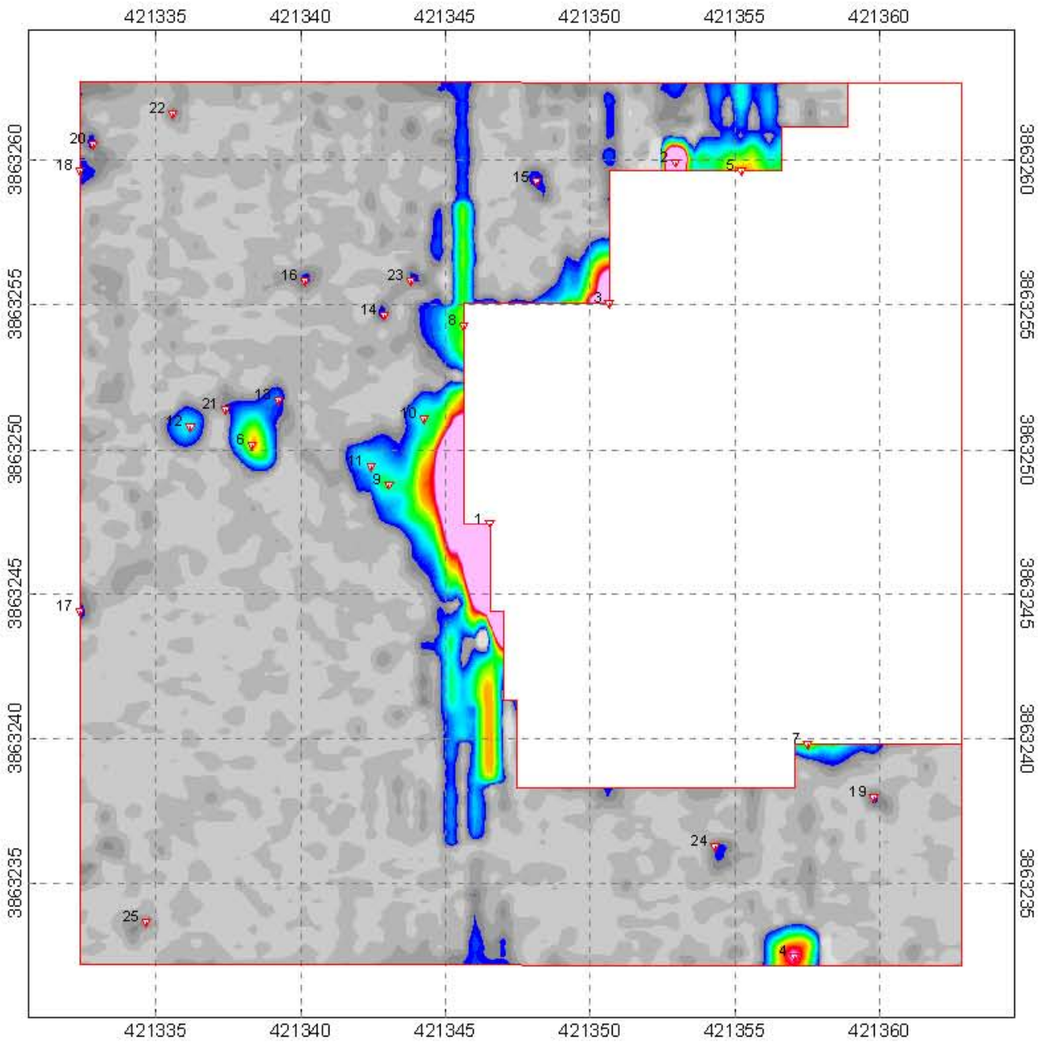
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: M16
Field Book ID:

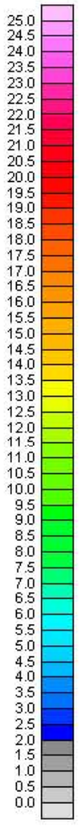
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
M-16_C1	421346.5479	3863247.44	46.5	50		1042	M-16_1	12/02/04	2600		0	0	01/22/05	CD			House foundation								01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-16_C10	421344.2637	3863251.06	39	61.88		7	M-16_14	12/02/04	51		0	0	01/22/05	MD	0.25		M15 parts					2	4		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-16_C11	421342.4351	3863249.421	33	56.5		6	M-16_12	12/02/04	43		0	0	01/22/05	MD	0.5		M15 parts	0	12			12	13		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-16_C12	421336.1893	3863250.794	12.5	61		6	M-16_19	12/02/04	30		0	0	01/22/05	MD	0.5		M15 part - hot rocks	-8.486563	-8.486563			8	9		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-16_C13	421339.2364	3863251.707	22.5	64		4	M-16_23	12/02/04	26		0	0	01/22/05	CD			Barb wire - LIP					9	9		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-16_C14	421342.8936	3863254.668	34.5	73.72		3	M-16_79	12/02/04	12		0	0	01/22/05	CD		2.5 x 0.5	Metal	0	-6			5	5		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-16_C15	421348.1507	3863259.246	51.75	88.75		3	M-16_28	12/02/04	20		0	0	01/22/05	MD	2		M15 parts					12	18		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-16_C16	421340.1516	3863255.82	25.5	77.5		3	M-16_13	12/02/04	40		0	0	01/22/05	MD	0.25		M15 top					1	2		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-16_C19	421359.7395	3863237.991	90	19		2	M-16_76	12/02/04	2		0	0	01/22/05	GEO			Hot rock - 2 x 2 x 1 hole								01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-16_C2	421352.9498	3863259.93	67.5	91		82	M-16_4	12/02/04	36		0	0	01/22/05	CD		4	Nail	0	24			2	2		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-16_C21	421337.4082	3863251.403	16.5	63		2	M-16_21	12/02/04	23		0	0	01/22/05	CD			Nail/large hot rock					12	12+		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-16_C22	421335.5828	3863261.611	10.5	96.5		2	M-16_67	12/02/04	4		0	0	01/22/05	MD	0.5		M15 parts	-24	0			8	9		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-16_C23	421343.8079	3863255.82	37.5	77.5		2	M-16_17	12/02/04	25		0	0	01/22/05	CD	0.25	12	Barb wire	0	0				6		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-16_C23.1	421343.8079	3863255.82	37.5	77.5		2		12/02/04	25		0	0	01/22/05	CD	0.25	12	Barb wire	0	0				2		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-16_C24	421354.3146	3863236.317	72	13.5		2	M-16_75	12/02/04	35		0	0	01/22/05	CD		12	Wire	0	24			4	4		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-16_C3	421350.6633	3863255.056	60	75		61	M-16_5	12/02/04	206		0	0	01/22/05	MD	0.25		M15 parts	0	-3			1	2		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-16_C4	421357.0558	3863232.507	81	1		26	M-16_7	12/02/04	172		0	0	01/22/05	MD			Shared with L16-C23								01/26/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
M-16_C5	421355.235	3863259.625	75	90		17	M-16_6	12/02/04	120		0	0	01/22/05	CD			7 Nails out to 24"					0	1		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-16_C6	421338.322	3863250.184	19.5	59		16	M-16_8	12/02/04	101		0	0	01/22/05	CD			Barb wire - LIP					4	4+		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-16_C7	421357.5148	3863239.82	82.5	25		14	M-16_9	12/02/04	48		0	0	01/22/05	CD		8	Wire					1	3		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-16_C8	421345.6357	3863254.296	43.5	72.5		10		12/02/04	4		0	0	01/22/05	CD		2 x 0.5	Tube, 1/2"					4	4		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-16_C9	421343.0443	3863248.812	35	54.5		8		12/02/04	36		0	0	01/22/05	MD	0.25		M15 parts					8	9		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005

* 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)

Scale 1:180

2.5 0 2.5 5 7.5 10

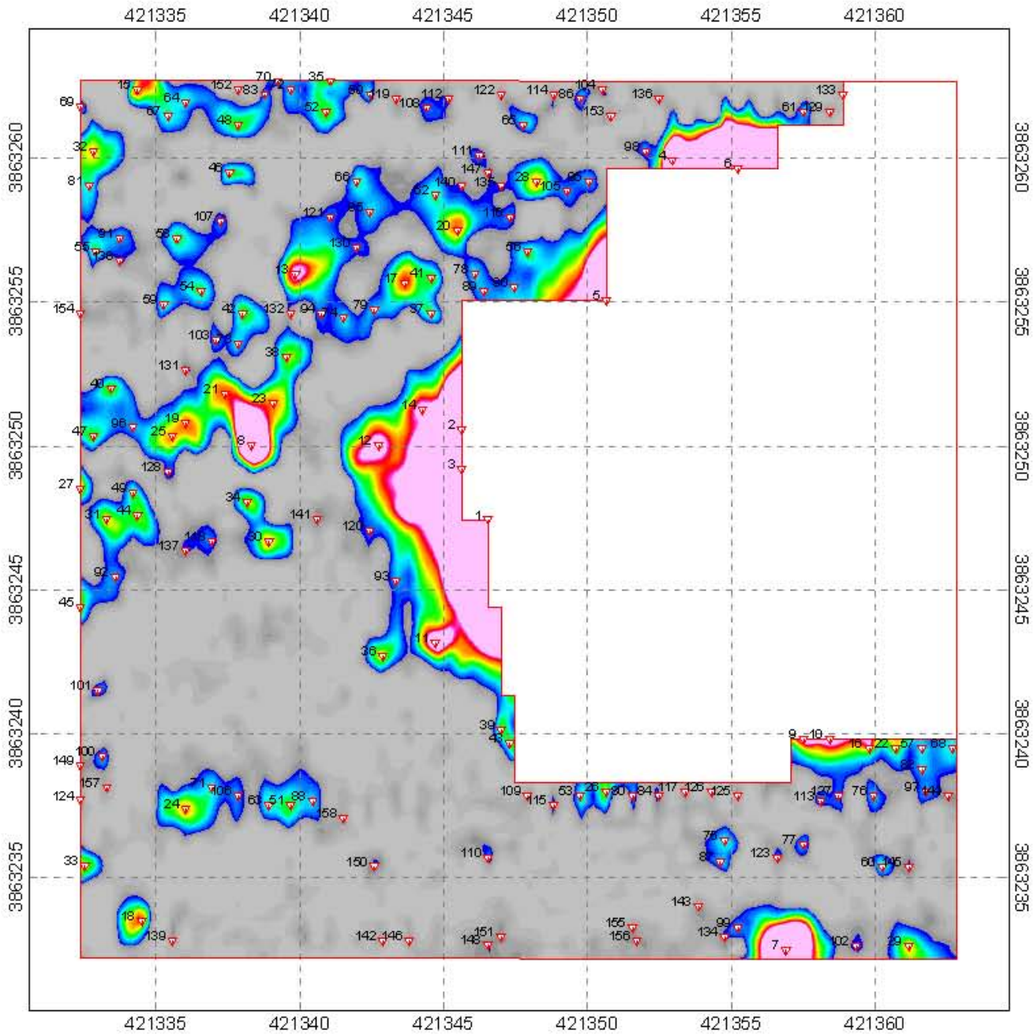
metres

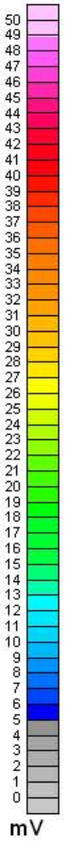
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid M-16
Camp Croft, South Carolina

Date of Survey: December 2, 2004





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)

Scale 1:180

2.5 0 2.5 5 7.5 10

metres

NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid M-16
Camp Croft, South Carolina

Date of Survey: December 2, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

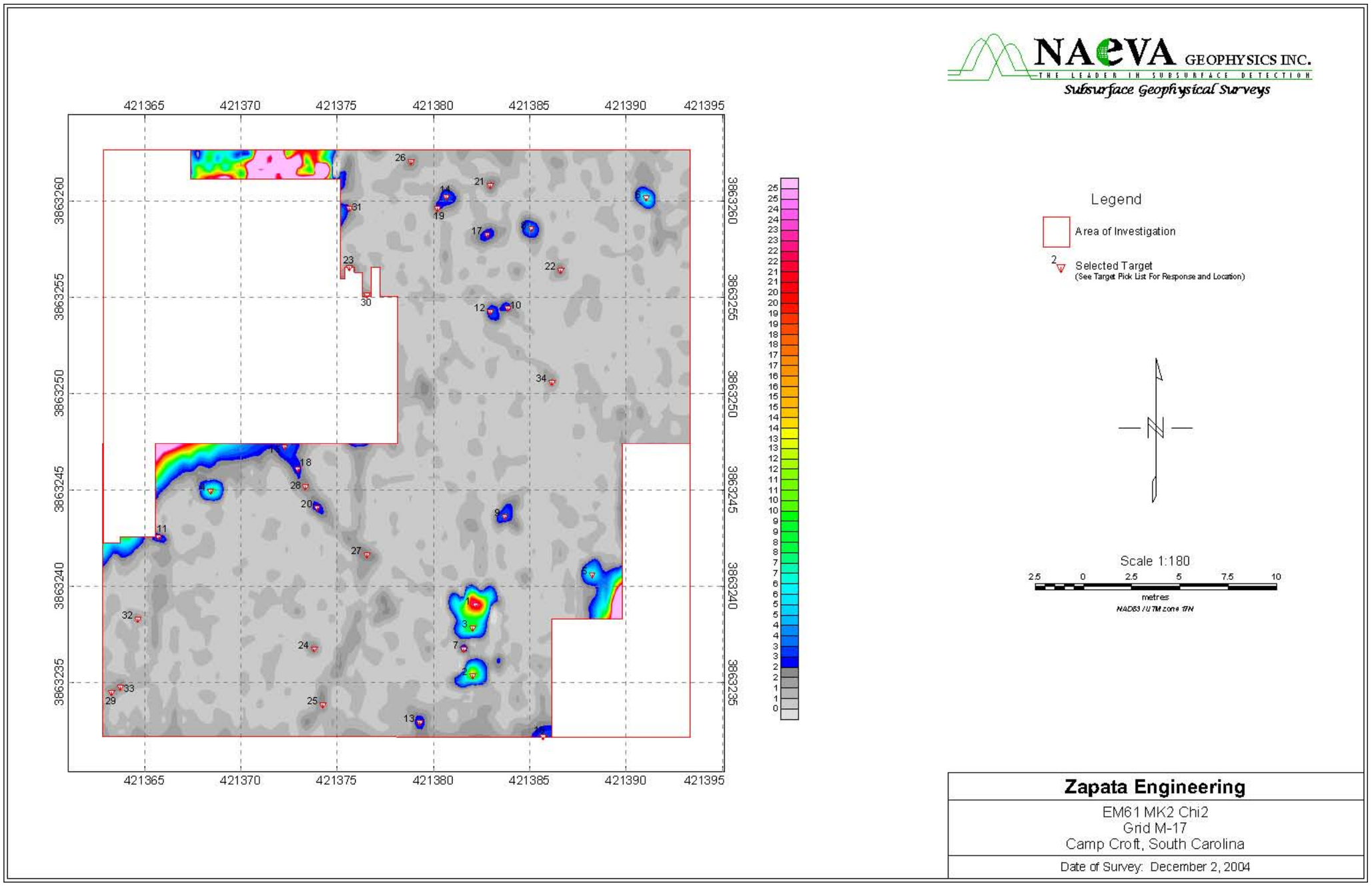
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: M17
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
M-17_C1	421382.1948	3863239.052	63.5	22.5		24	M-17_2	12/02/04	71		0	0	01/22/05	MD	2	14 x 6 x 0.125	M15 WP grenade - 3 grenade bodies	9	0			3	5		01/25/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
M-17_C13	421379.2985	3863232.958	54	2.5		3	M-17_27	12/02/04	10		0	0	01/22/05	CD	0.25	10	Wire	2.8288543	2.8288543			1	2		01/25/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
M-17_C15	421372.2935	3863247.206	30.9969	49.256		3	M-17_11	12/02/04	12		0	0	01/22/05	CD			Coax cable					2	2		01/25/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
M-17_C18	421372.9606	3863246.089	33.1872	45.5885		3	M-17_49	12/02/04	8		0	0	01/22/05	CD			Coax cable					2	2		01/25/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
M-17_C2	421382.0414	3863235.395	63	10.5		14	M-17_8	12/02/04	53		0	0	01/22/05	CD	0.25	5 x 4 x 2	Aluminum can					2	3		01/25/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
M-17_C20	421373.9694	3863244.081	36.5	39		2	M-17_59	12/02/04	7		0	0	01/22/05	CD			Coax cable					2	2		01/25/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
M-17_C24	421373.8151	3863236.769	36	15		2	M-17_46	12/02/04	2		0	0	01/22/05	GEO		1 x 1 x 1	Geo rock					3	3.5		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
M-17_C25	421374.2713	3863233.874	37.5	5.5		2	M-17_107	12/02/04	7		0	0	01/22/05	CD			Coax cable					2	2		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
M-17_C26	421378.8493	3863262.056	52.5	98		2	M-17_80	12/02/04	2		0	0	01/22/05	CD		1 x 0.062	Slug - slug from elect power box					1	1		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
M-17_C27	421376.5586	3863241.643	45	31		2	M-17_69	12/02/04	6		0	0	01/22/05	CD			Coax cable					2	2		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
M-17_C28	421373.3603	3863245.148	34.5	42.5		2	M-17_94	12/02/04	7		0	0	01/22/05	CD			Coax cable					2	2		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
M-17_C3	421382.0421	3863237.833	63	18.5		11	M-17_7	12/02/04	36		0	0		MD	0.75	6 x 4	M15 grenade - grenade body	-5	0			0	1		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
M-17_C34	421386.1589	3863250.629	76.5	60.5		2		12/02/04	5		0	0	01/22/05	CD	0.25	3 x 2 x 0.062	Aluminum lid	0	10			4	4		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
M-17_C4	421368.436	3863244.937	18.3388	41.8046		8	M-17_17	12/02/04	24		0	0	01/22/05	CD			Coax cable	-7.072136	7.0721358			2	2		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
M-17_C5	421388.2491	3863240.592	83.36903	27.56028		6.1770263		12/02/04			0	0		NC			No contact - flag missing (x,y measured)								01/25/05	DRG	Yes	HEL	01/26/05	NA	DRA	02/21/06
M-17_C6	421391.0449	3863260.153	92.5275	91.7642		6	M-17_18	12/02/04	34		0	0	01/22/05	CD	0.5	1.5 x 1.5 x 0.75	Bolt nut	0	10			2	2.25		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
M-17_C7	421381.5847	3863236.766	61.5	15		4		12/02/04	2		0	0	01/22/05	MD	0.25	1	M15 grenade - pull ring, spring, spoon	-12.72984	12.729844			1	1		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005

* 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
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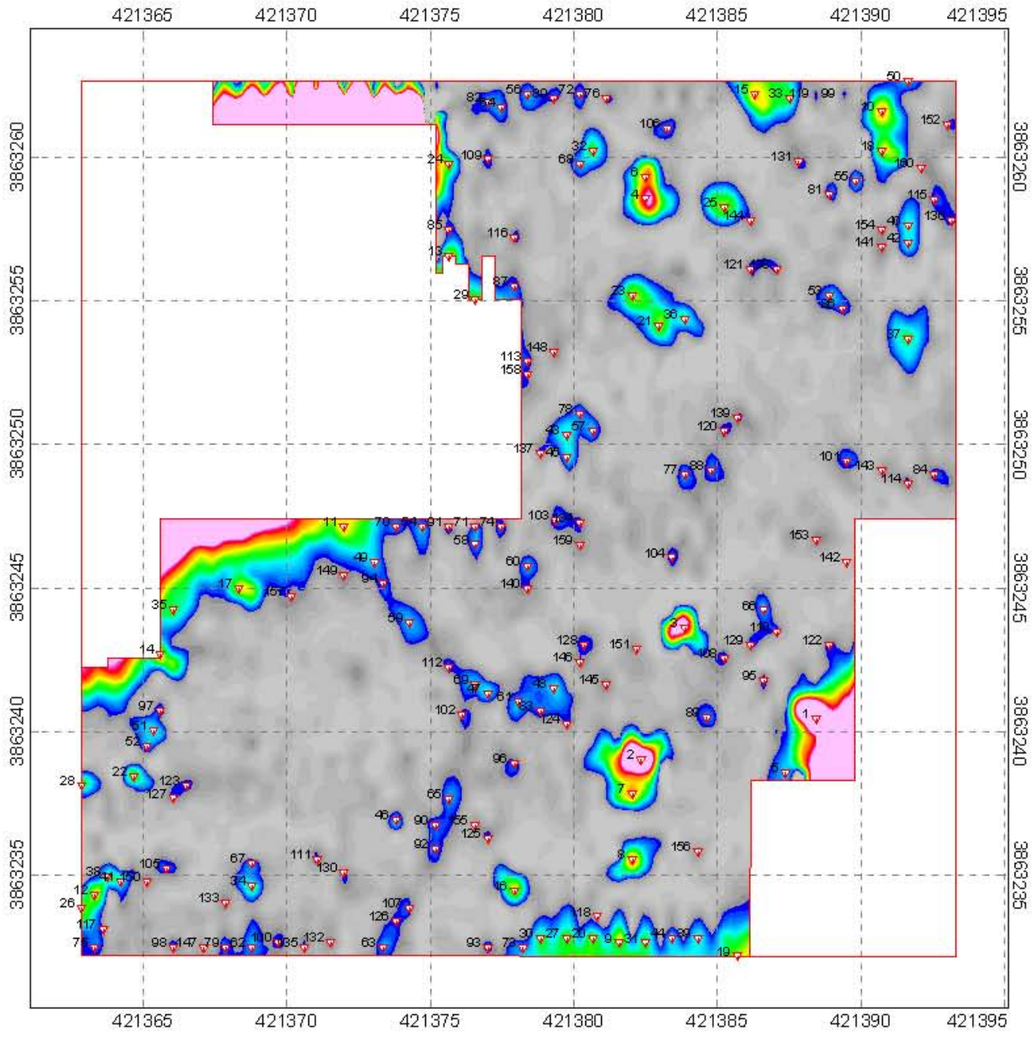
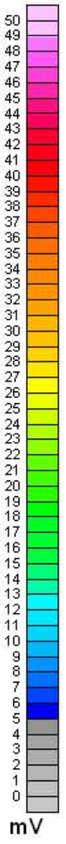
3863235
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Scale 1:180
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid M-17
Camp Croft, South Carolina
Date of Survey: December 2, 2004



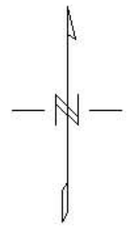


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid M-17
Camp Croft, South Carolina

Date of Survey: December 2, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

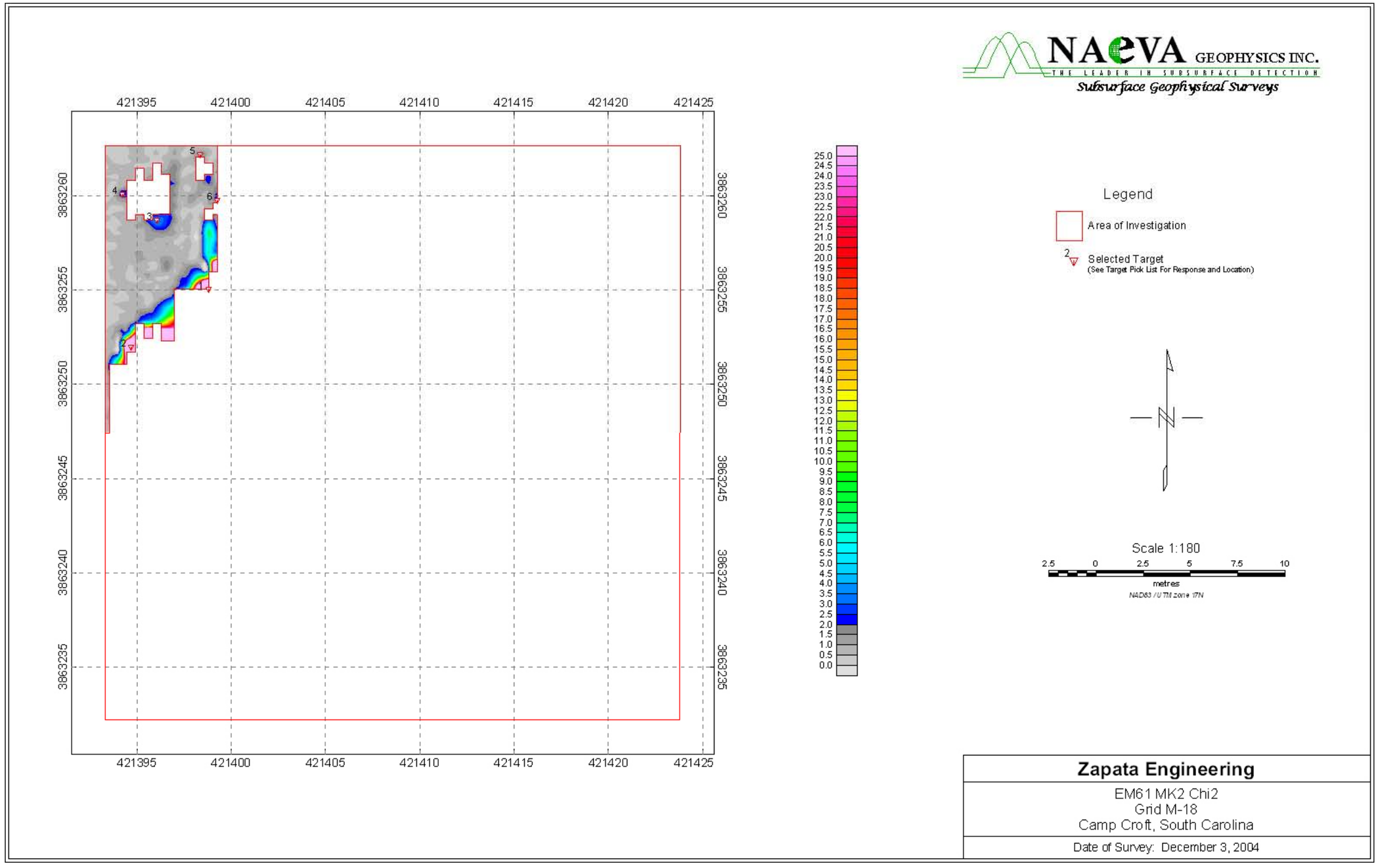
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: M18
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
M-18_C1	421398.8067	3863255.045	18	75		98		12/03/04			0	0	01/22/05	NC			Dug 2' x 2' x 1' at flag - within 2' of metal large trailer								01/26/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-18_C2	421394.6911	3863251.998	4.5	65		76		12/03/04			0	0	01/22/05	CD	0.25	4 x 0.125	Old nail	8	0			1	1		01/26/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-18_C3	421396.0645	3863258.701	9	87		4	M-18_2	12/03/04	24		0	0	01/22/05	CD	0.25	10	Barb wire	8	0			2	3		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
M-18_C4	421394.2361	3863260.072	3	91.5		3	M-18_8	12/03/04	2		0	0	01/22/05	GEO	30	12 x 10 x 8	Geo rock	7.0721358	7.0721358			0	4		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
M-18_C5	421398.3515	3863262.205	16.5	98.5		3	M-18_4	12/03/04	3		0	0	01/22/05	GEO	5	8 x 6 x 2	Geo rock					1	2		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
M-18_C6	421399.2652	3863259.767	19.5	90.5		2	M-18_3	12/03/04	10		0	0	01/22/05	MD	0.25	5 x 2	M15 grenade - grenade body O/E scrap	-19.80198	19.80198			1	1		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005

* 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
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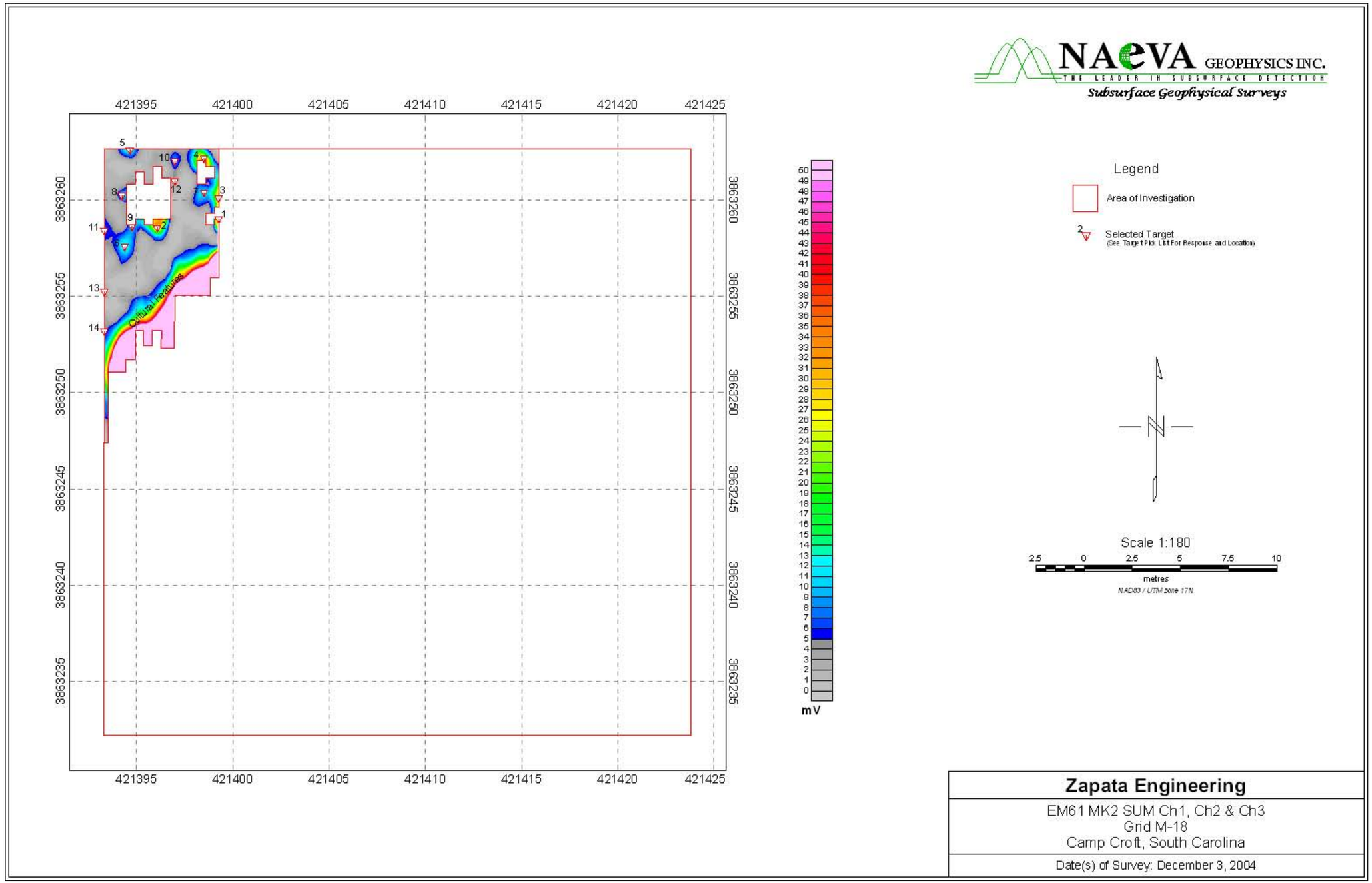
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
N
Scale 1:180
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid M-18
Camp Croft, South Carolina
Date of Survey: December 3, 2004


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
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mV
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Scale 1:180
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid M-18
Camp Croft, South Carolina
Date(s) of Survey: December 3, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: M22
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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				Depth (in)												
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs)	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
M-22_11	421545.6606	3863232.152	100	0	69.0			11/30/04			0	0		CD	.25	8 x .25 x .25	large nail, Rusted	0	0	NA	90	0	4	M22_11 - #009	1/23/06	barn	YES	TF	01/25/06	YES	RVW	01/25/06
M-22_13	421520.5311	3863260.8	17.5	94	68.0		M-22_C12	11/30/04	65		12	0	01/08/05	CD	2	120	Wire					1	1		01/10/05	HEL	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_20	421516.5705	3863262.266	4.5	98.81	43.0			11/30/04			0	0		CD	.25	3 x .25 x .25	nails, Rusted	0	0	NA	0	3	3	M22_20 - #044	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
M-22_21	421516.874	3863257.754	5.5	84	31.0		M-22_C33	11/30/04	36		6	6	01/08/05	GEO	1	2 x 2	Rock	0	-8			4	6		01/10/05	HEL	NA	DRA	02/22/06	YES	DRA	02/21/06
M-22_22	421544.7498	3863244.188	97	39.5	28.0		M-22_C40	11/30/04	37		9	-6	01/13/05	CD	0.75	7 x 0.625	Stake	0	8			6	6.5		01/17/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_23	421518.5508	3863261.257	11	95.5	30.0			11/30/04	31		12	0	01/08/05	GEO	1	4 x 4	Rocks	-10	0			0	8		01/10/05	HEL	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_26	421517.3316	3863259.734	7	90.5	31.0		M-22_C36	11/30/04	47		0	-12	01/08/05	GEO	10	8 x 8	Rock	-18	0			3	10		01/10/05	HEL	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_3	421522.8119	3863244.193	25	39.5	293.0		M-22_C4	11/30/04	315		0	0	01/08/05	CD	2	240	Barb wire	-6	0			1	1		01/10/05	HEL	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_33	421516.8744	3863259.125	5.5	88.5	22.0			11/30/04	25		0	0	01/08/05	GEO	5	5 x 5	Rock	8	0			4	10		01/10/05	HEL	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_34	421523.4245	3863256.381	27	79.5	22.0			11/30/04			0	0		CD	.25	14 x .25 x .25	wire, Rusted	0	0	E	15	5	6	M22_34 - #019	1/23/06	barn	YES	TF	01/25/06	YES	RVW	01/25/06
M-22_36	421526.6225	3863251.505	37.5	63.5	18.0		M-22_C59	11/30/04	20		0	0	01/08/05	GEO	0.5	5	Rock	-12	0			6	9		01/10/05	HEL	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_37	421543.988	3863244.264	94.5	39.75	18.0			11/30/04			0	0		CD	.25	3 x .25 x .25	wire, Rusted	5	-8	NA	0	5	5	M22_37 - #026/M22_37a - #007	1/25/06	barn	NA	DRA	02/22/06	YES	RVW	
M-22_38	421523.2731	3863259.732	26.5	90.5	21.0		M-22_C38	11/30/04	18		12	-6	01/08/05	GEO	10	5 x 5	Rocks	12	0			4	9		01/10/05	HEL	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_39	421543.8354	3863242.969	94	35.5	14.0			11/30/04	23		0	-6	01/13/05	CD	0.5	7 x 0.375	Nail	0	-8			3	6		01/17/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_4	421523.5737	3863244.65	27.5	41	291.0		M-22_C3	11/30/04	400		-6	-6	01/08/05	CD	2	240	Barb wire	6	0			1	1		01/10/05	HEL	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_40	421521.7436	3863237.186	21.5	16.5	19.0		M-22_C28	11/30/04	22		12	12	01/08/05	CD	0.5	10	Barb wire	0	-12			8	12		01/10/05	HEL	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_41	421521.5979	3863262.17	21	98.5	17.0			11/30/04			0	0		CD	.5	16 x .25 x .25	barbed wire, shared with m22-c46, Rusted	0	0	NW	15	3	3	M22_41 - #021	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
M-22_43	421526.6227	3863252.267	37.5	66	13.0			11/30/04			0	0		CD	1	12 x 1 x .25	12 inches of steel, shared with m22-c59, Rusted	-6	4	SE	0	11	11	M22_43 - #027	1/25/06	barn	NA	DRA	02/22/06	YES	RVW	
M-22_45	421543.3777	3863240.836	92.5	28.5	15.0		M-22_C29	11/30/04	37		0	-12	01/13/05	CD	0.25	19	Barb wire / Digged clear to asphalt					3	3		01/17/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_47	421539.8741	3863241.904	81	32	12.0			11/30/04			0	0		NC			target under cart path,							1b ph016	1/23/06	barn	NA	DRA	02/22/06	NA	DRA	02/22/06
M-22_50	421526.1643	3863247.392	36	50	12.0			11/30/04	6		0	0	01/08/05	GEO	5	4 x 5	Rock	14	0			8	10		01/10/05	HEL	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_51	421540.1776	3863237.79	82	18.5	11.0			11/30/04			0	0		NC			target under cart path, shared with m22-60							M22_51 - #008	1/23/06	barn	NA	DRA	02/22/06	NA	DRA	02/22/06
M-22_60	421540.1774	3863237.029	82	16	9.0			11/30/04			0	0		NC			target under cart path,							M22_60 - #008	1/23/06	barn	NA	DRA	02/22/06	NA	DRA	02/22/06
M-22_63	421524.7906	3863237.642	31.5	18	10.0			11/30/04	10		-12	6	01/08/05	GEO	0.5	2 x 3 x 2	Rock	-24	0			4	5		01/10/05	HEL	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_64	421524.7936	3863248.763	31.5	54.5	9.0			11/30/04	16		0	12	01/08/05	GEO	15		Rocks	0	-18			3	15		01/10/05	HEL	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_76	421523.2661	3863233.681	26.5	5	7.0		M-22_C56	11/30/04	20		6	0	01/08/05	CD	0.5	12	Barb wire			N	N/A	3	3		01/10/05	HEL	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_9	421517.4847	3863262.458	7.5	99.44	110.0		M-22_C7	11/30/04	160		0	0	01/08/05	CD	2	60	Barb wire					3	3		01/10/05	HEL	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C10	421522.5114	3863259.885	24	91		11		11/30/04			0	0		CD			Shared with C8								01/31/05	RW	NA	DRA	02/22/06	YES	DRA	02/21/06
M-22_C12	421520.2264	3863260.647	16.5	93.5		11	M-22_13	11/30/04			0	0		CD			Shared with C8								01/31/05	RW	NA	DRA	02/22/06	YES	DRA	02/21/06
M-22_C13	421518.3959	3863251.812	10.5	64.5		9		11/30/04			0	0		GEO			Hot rock					0	0+		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C14	421522.9653	3863248.154	25.5	52.5		9	M-22_105	11/30/04			0	0		NC			Hot Rock for during Phase I - Rechecked and NC										NA	DRA	02/22/06	NA	DRA	02/22/06
M-22_C14	421522.9653	3863248.154	25.5	52.5		9	M-22_105	11/30/04			0	0		GEO			Hot rock					0	0+		01/31/05	RW	NA	DRA	02/22/06	NO	AJP	3/5/2005
M-22_C19	421545.3585	3863241.902	99	32		6	M-22_14	11/30/04			0	0		CD		0.25 x 2	Nail	-3	0			3	3		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C2	421522.8124	3863246.174	25	46		62	M-22_2	11/30/04			0	0		CD		0.125 x 48	Wire - some LIP	-8.486563	8.4865629			0			01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C23	421523.4204	3863240.994	27	29		6	M-22_12	11/30/04			0	0		CD		0.25 x 6	6" survey nail	-8.486563	8.4865629			0	3		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C24	421521.5976	3863261.104	21	95		5		11/30/04			0	0		CD			Shared with M-22_C8								01/31/05	RW	NA	DRA	02/22/06	YES	DRA	02/21/06
M-22_C26	421523.8811	3863254.552	28.5	73.5		5	M-22_28	11/30/04			0	0		CD		0.125 x 16	Wire/hot rock	2.1216407	-2.121641			1	4		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C27	421545.3583	3863241.14	99	29.5		5		11/30/04			0	0		CD		0.125 x 14	Wire	0	5			3	3		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C28	421521.5912	3863237.033	21	16		5	M-22_40	11/30/04			0	0		CD		0.125 x 8	Wire - 2 pc	0	-12			2	2		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C29	421543.1585	3863240.819	91.7805	28.4419		5	M-22_45	11/30/04			0	0		CD		0.125 x 3	Wire	6	0			2	2		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

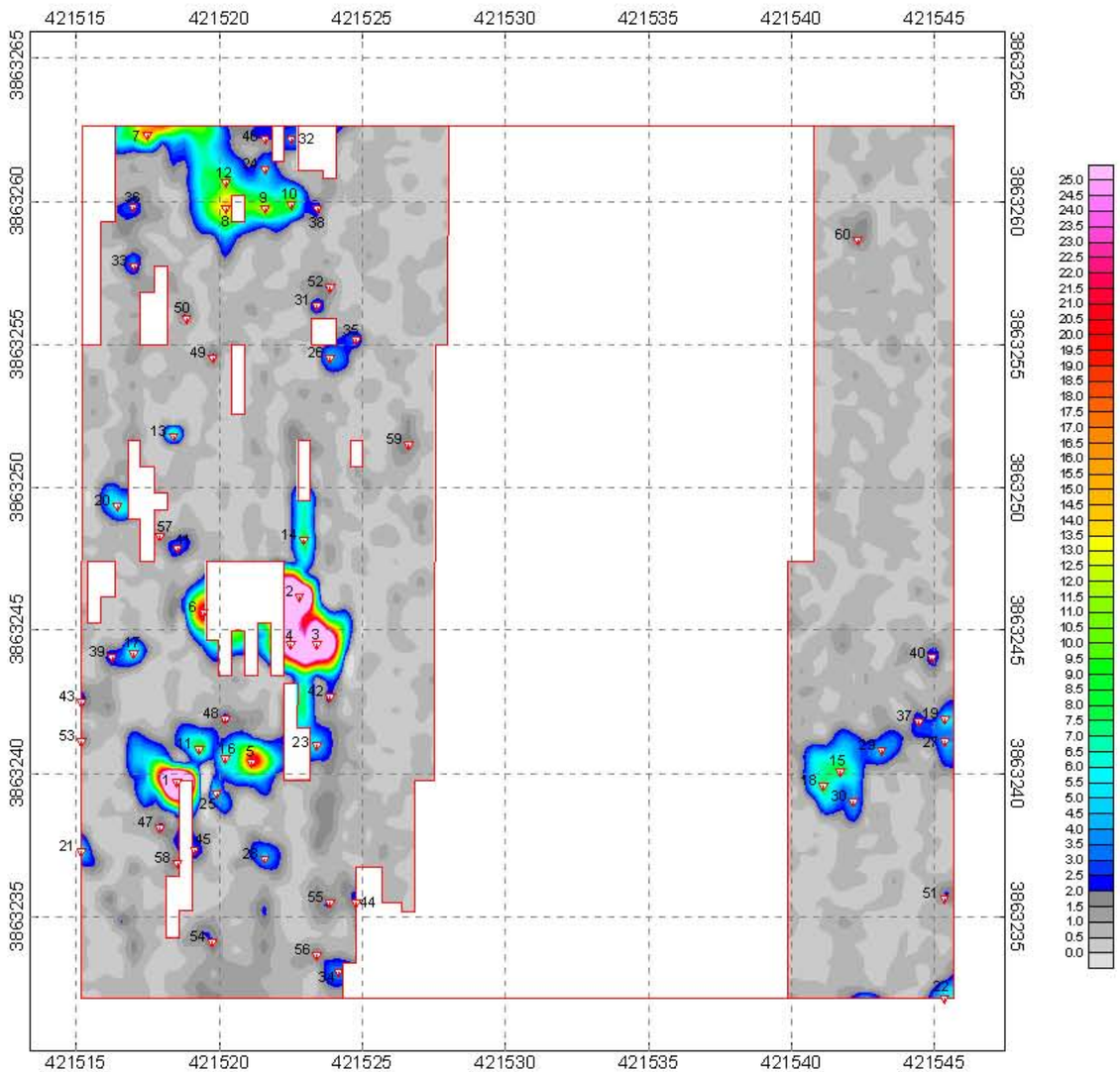
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: M22
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	$Ch1^2$ Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	$Ch1^2$ Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs)	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
M-22_C3	421523.4213	3863244.498	27	40.5		42	M-22_4	11/30/04			0	0		GEO			Hot rock	2.8288543	2.8288543			2	3		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C30	421542.1585	3863239.009	88.5	22.5		4	M-22_53	11/30/04			0	0		CD		0.125	Wire - LIP	4.2432815	4.2432815			3	3+		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C31	421523.4245	3863256.381	27	79.5		4	M-22_34	11/30/04			0	0		GEO			Hot rock					0	0+		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C32	421522.512	3863262.17	24	98.5		4	M-22_27	11/30/04			0	0		GEO			Hot rock					0	0+		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C33	421517.0263	3863257.754	6	84		4	M-22_21	11/30/04			0	0		CD		0.125 x 4	7 nails					2	4		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C35	421524.7953	3863255.162	31.5	75.5		4	M-22_48	11/30/04			0	0		CD		0.125	Wire/hot rock	-14	0			0	6		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C36	421516.9975	3863259.795	5.9034	90.7017		3	M-22_26	11/30/04			0	0		CD		0.125 x 4	Wire/nail	-12	0			4	4		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C37	421544.4444	3863241.814	96	31.71		3	M-22_29	11/30/04			0	0		CD		0.125 x 3	Wire	0	-6			3	3		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C38	421523.4254	3863259.732	27	90.5		3	M-22_38	11/30/04			0	0		GEO			Hot rock					0	0+		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C40	421544.9021	3863244.035	97.5	39		3	M-22_22	11/30/04			0	0		CD		0.125 x 6	Nail	0	6						01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C42	421523.8779	3863242.67	28.5	34.5		3		11/30/04			0	0		GEO			Hot rocks					0	0+		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C44	421524.79	3863235.509	31.5	11		3	M-22_72	11/30/04			0	0		CD		0.125 x 14	Wire - some LIP	0	12			18	18+		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C46	421521.5979	3863262.17	21	98.5		2	M-22_41	11/30/04			0	0		CD	.5	16 x .25 x .25	barbed wire, Rusted	0	0	NW	15	3	3	M22_C46 - #021	1/23/06	bam	NA	DRA	02/22/06	YES	RVW	
M-22_C46	421521.5979	3863262.17	21	98.5		2	M-22_41	11/30/04			0	0		GEO			Hot rock					0	0+		01/31/05	RW	NA	DRA	02/22/06	NO	AJP	3/5/2005
M-22_C49	421519.7677	3863254.554	15	73.5		2	M-22_104	11/30/04			0	0		NC			checked with em-61 still nc								1/23/06	bam	YES	TF	01/25/06	NA	DRA	02/22/06
M-22_C49	421519.7677	3863254.554	15	73.5		2	M-22_104	11/30/04			0	0		GEO			Hot rock					0	0+		01/31/05	RW	NA	DRA	02/22/06	NO	AJP	3/5/2005
M-22_C50	421518.854	3863255.925	12	78		2	M-22_101	11/30/04			0	0		CD	.25	13 x .25 x .25	wire, Rusted	0	0	E	0	5	5	M22_C50 - #020	1/23/06	bam	NA	DRA	02/22/06	YES	RVW	
M-22_C50	421518.854	3863255.925	12	78		2	M-22_101	11/30/04			0	0		GEO			Hot rock					0	0+		01/31/05	RW	NA	DRA	02/22/06	NO	AJP	3/5/2005
M-22_C51	421545.3568	3863235.656	99	11.5		2		11/30/04			0	0		CD		1	Ring/washer	0	2			1.5			01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C52	421523.8817	3863256.99	28.5	81.5		2	M-22_59	11/30/04			0	0		CD	.25	7 x .25 x .25	barbed wire, Rusted	0	0	NA	15	5	6	M22_C52 - #022	1/23/06	bam	YES	TF	01/25/06	YES	RVW	01/25/06
M-22_C52	421523.8817	3863256.99	28.5	81.5		2	M-22_59	11/30/04			0	0		GEO			Hot rock					0	0+		01/31/05	RW	NA	DRA	02/22/06	NO	AJP	3/5/2005
M-22_C55	421523.876	3863235.509	28.5	11		2		11/30/04			0	0		CD		0.125 x 14	Wire - some LIP	0	8			3	3+		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C56	421523.4184	3863233.681	27	5		2	M-22_76	11/30/04			0	0		CD			Wire	-14	0			3	3		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C59	421526.6225	3863251.505	37.5	63.5		2	M-22_36	11/30/04			0	0		CD	1	12 x 1 x .25	12 inches of steel, Rusted	5	-3	NW	0	11	11	M22_C59 - #018	1/25/06	bam	NA	DRA	02/22/06	YES	RVW	
M-22_C59	421526.6225	3863251.505	37.5	63.5		2	M-22_36	11/30/04			0	0		GEO			Hot rock	-8	0						01/31/05	RW	NA	DRA	02/22/06	NO	AJP	3/5/2005
M-22_C60	421542.3161	3863258.661	89	87		2	M-22_91	11/30/04			0	0		CD		0.125 x 16	Wire	10	0			2	3		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C7	421517.4846	3863262.324	7.5	99		19	M-22_9	11/30/04			0	0		CD	.25	3 x .25 x .25	nails, Rusted	0	0	NA	0	3	3	M22_C7 - #042	1/24/06	rfy	NA	DRA	02/22/06	YES	RVW	
M-22_C7	421517.4846	3863262.324	7.5	99		19	M-22_9	11/30/04			0	0		GEO			Surface hot rocks	8.4865629	-8.486563						01/31/05	RW	NA	DRA	02/22/06	NO	AJP	3/5/2005
M-22_C8	421520.2262	3863259.733	16.5	90.5		14	M-22_8	11/30/04			0	0		CD		0.125 x 120	Wire	0	12			2	2		01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005
M-22_C9	421521.5973	3863259.733	21	90.5		13	M-22_7	11/30/04			0	0		CD			Shared with C8								01/31/05	RW	NA	DRA	02/22/06	YES	AJP	3/5/2005

* 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)

Scale 1:180

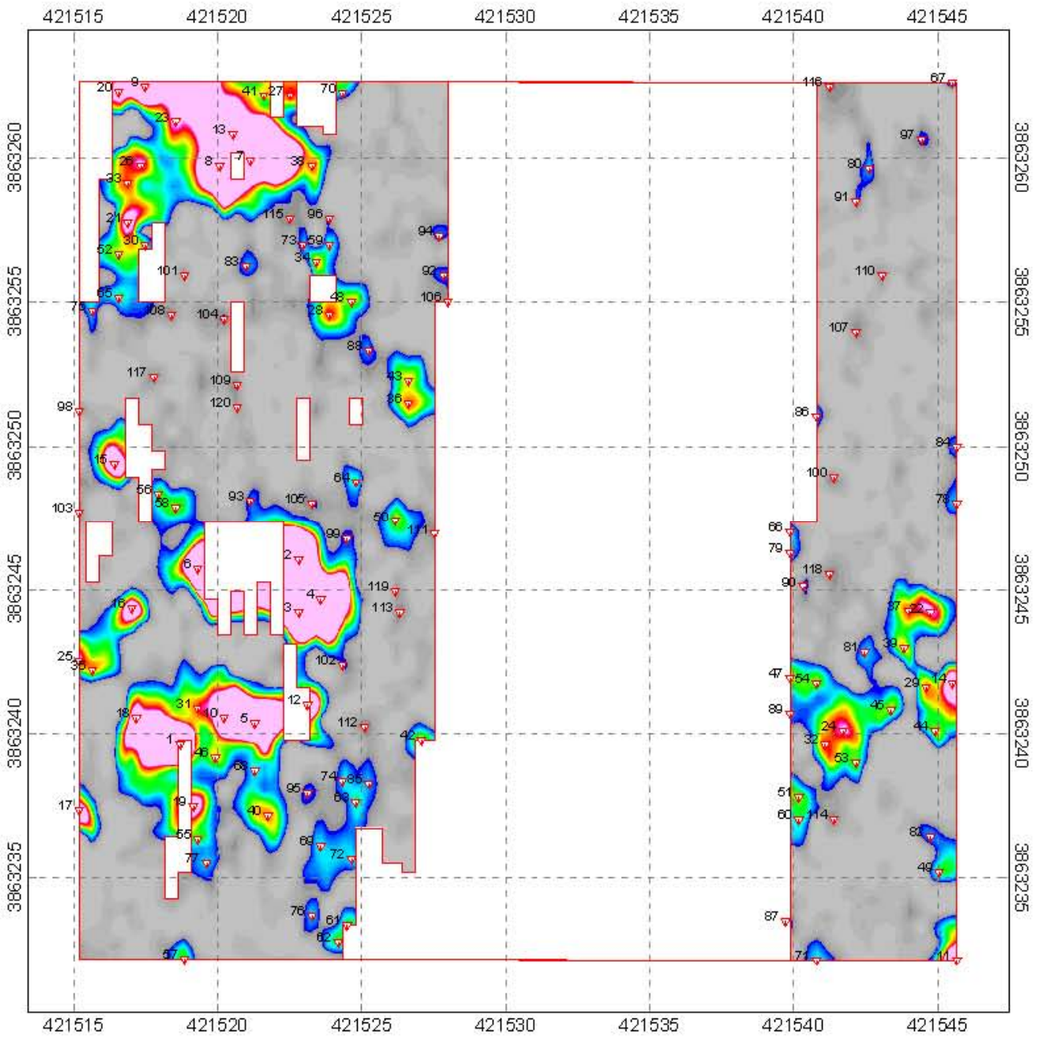
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

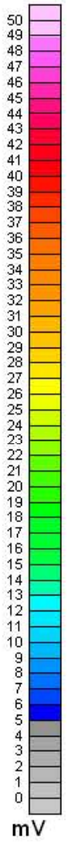
Zapata Engineering

EM61 MK2 Chi2
Grid M-22
Camp Croft, South Carolina

Date of Survey: November 30, 2004

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

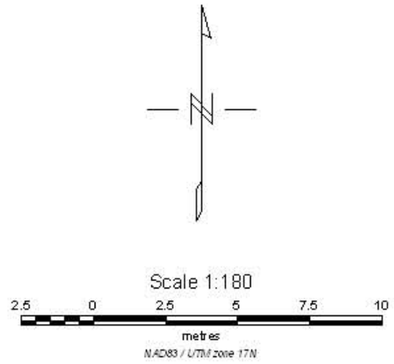




Legend

Area of Investigation

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

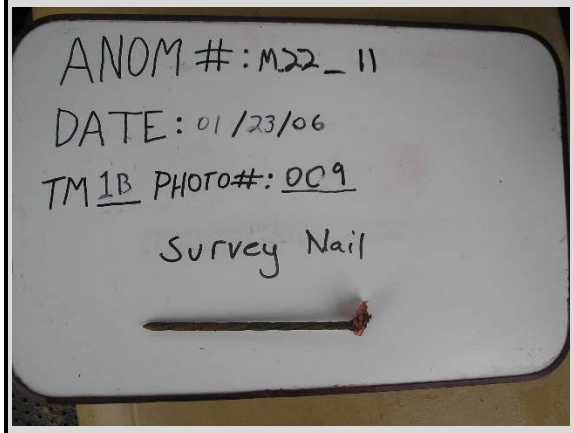


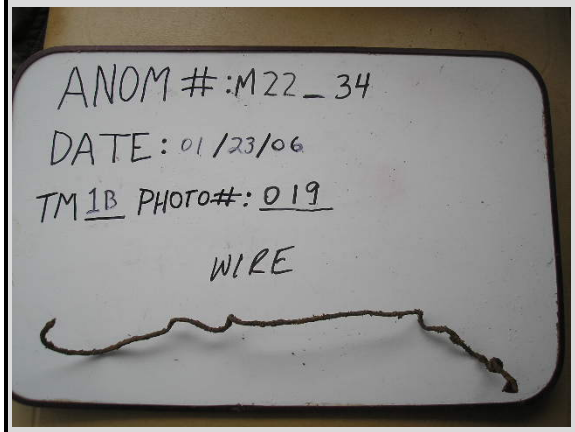
Zapata Engineering

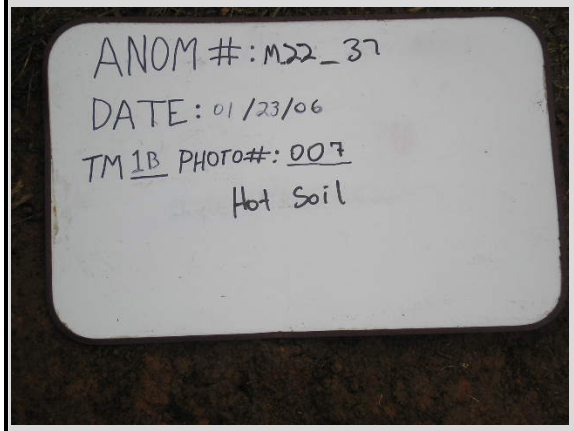
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid M-22
Camp Croft, South Carolina

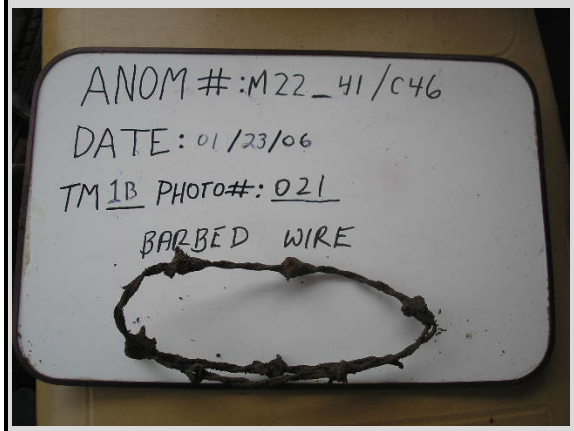
Date of Survey: November 30, 2004

GRID M22 DIG PHOTOS

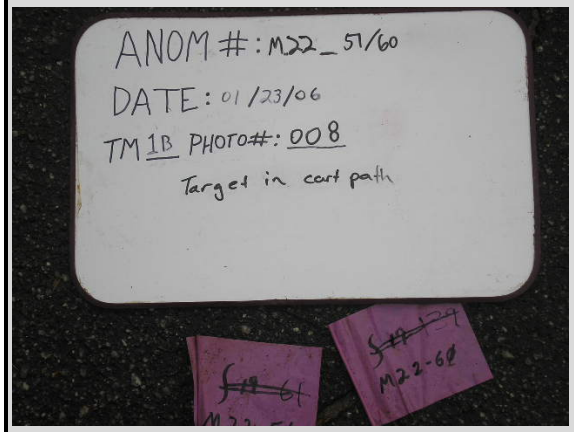


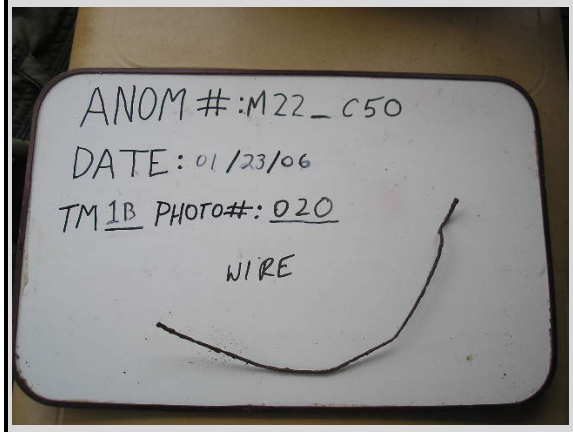


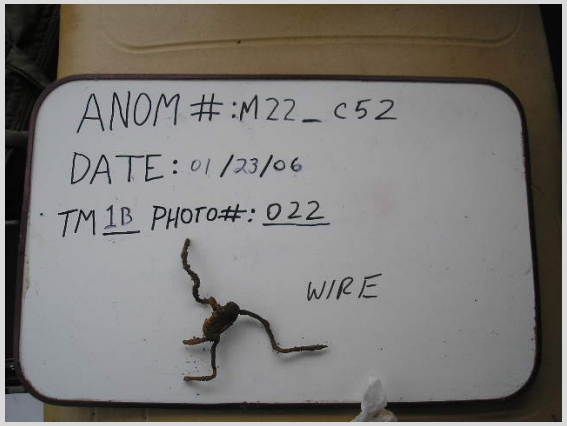


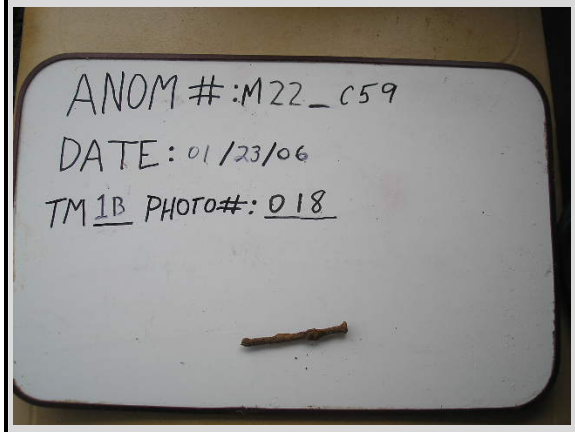


GRID M22 DIG PHOTOS (CONTINUED)









ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

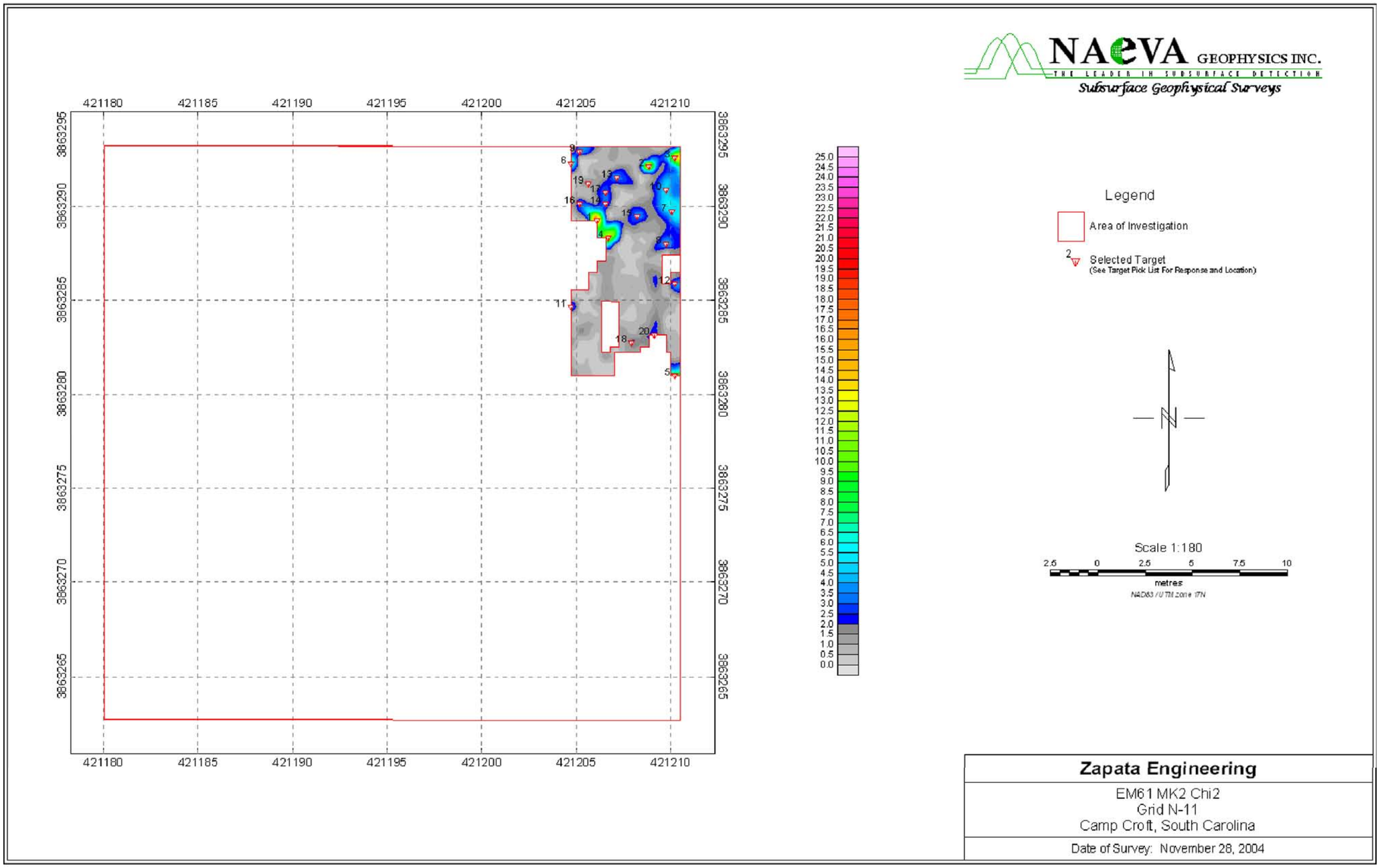
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: N11
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
N-11_1	421210.21	3863292.572	99	98	193.0		N-11_C3	11/28/04	145		0	0	01/10/05	CD			Cement foundation form								01/17/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005
N-11_14	421209.7526	3863291.201	97.5	93.5	24.0		N-11_C10	11/28/04	35		6	6	01/10/05	CD		3	Nails					2	2		01/17/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005
N-11_8	421210.5129	3863285.868	100	76	31.0			11/28/04	35		0	-6	01/10/05	CD	0.5	12	Tent stake	12	0			1	1		01/17/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005

* 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
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421210
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6.0
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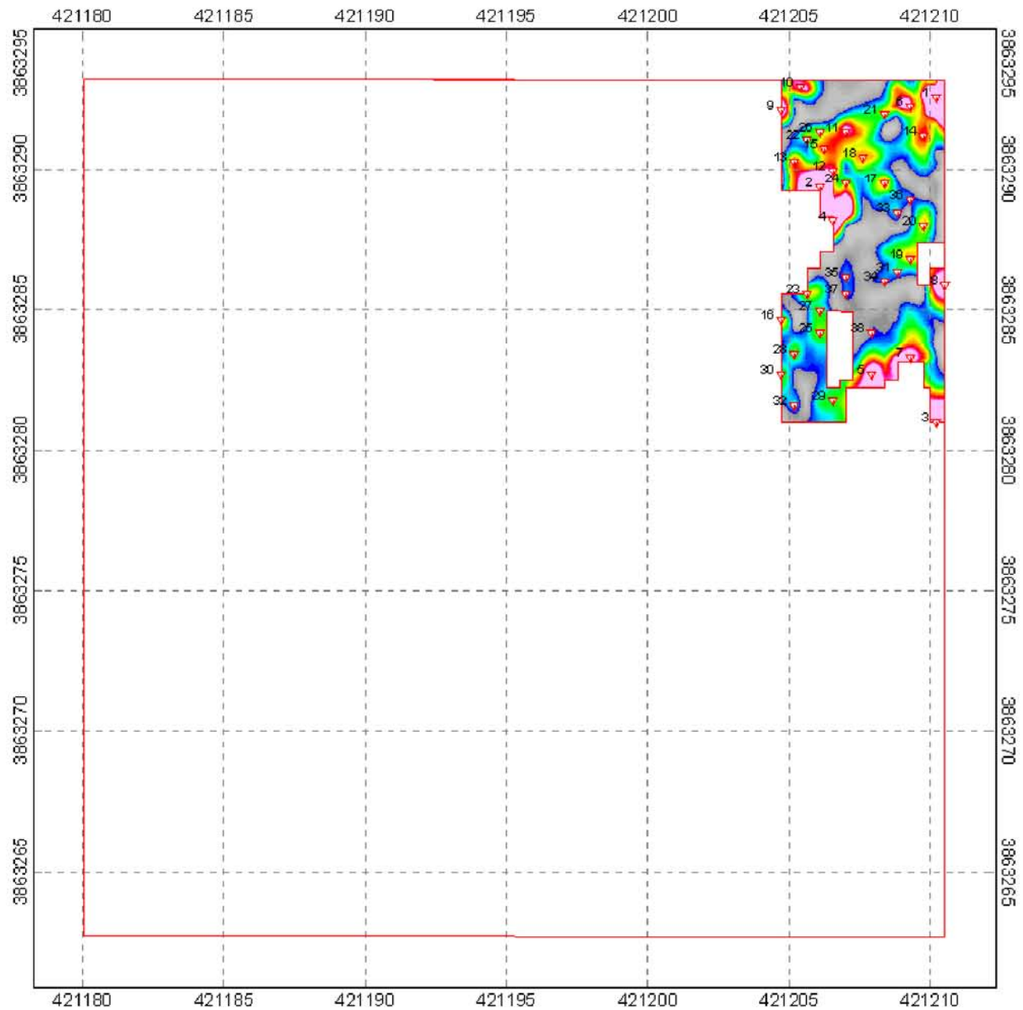
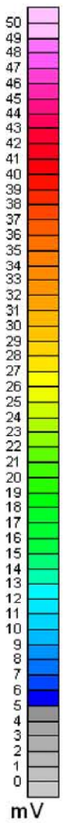
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Scale 1:180
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid N-11
Camp Croft, South Carolina
Date of Survey: November 28, 2004



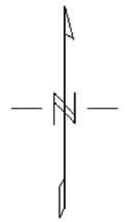


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid N-11
Camp Croft, South Carolina

Date of Survey: November 28, 2004

FINAL
SITE SPECIFIC FINAL REPORT
VOLUME II

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

US Army Corps of Engineers, Charleston District

Prepared By:

ZAPATA ENGINEERING
TRUST • INTEGRITY • QUALITY
6302 Fairview Road, Suite 600
Charlotte, NC 28210

APRIL 2006

TABLE OF CONTENTS

APPENDICES

VOLUME II

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

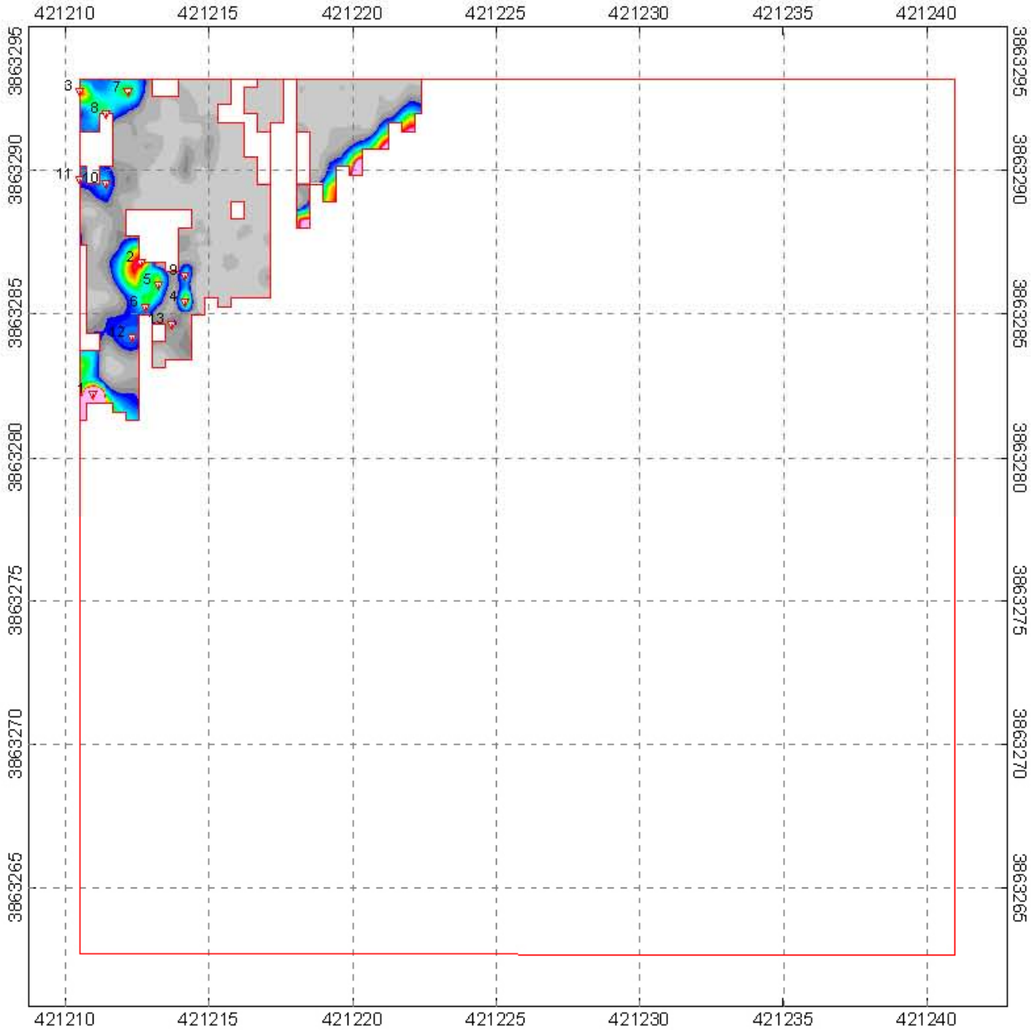
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: N12
Field Book ID:

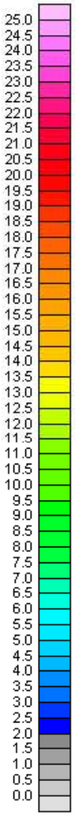
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
N-12_1	421210.9689	3863282.212	1.5	64	2416.0		N-12_C1	11/26/04	16		0	0	01/10/05	CD			Bird feeder	0	-36						01/18/05	RLF	Yes	HEL	01/25/05	YES	AJP	3/5/2005
N-12_19	421212.0375	3863289.981	5	89.5	5.0			11/26/04	13		-12	6	01/10/05	CD		1	Nail					1	1		01/18/05	RLF	Yes	HEL	01/25/05	YES	AJP	3/5/2005
N-12_2	421212.646	3863286.629	7	78.5	524.0		N-12_C2	11/26/04	615		0	0	01/10/05	CD	1	9	Metal (7 nails)					0	0		01/18/05	RLF	Yes	HEL	01/25/05	YES	AJP	3/5/2005
N-12_4	421212.1906	3863292.723	5.5	98.5	47.0		N-12_C7	11/26/04	68		0	0	01/10/05	CD	0.25		Nail	0	0			1	1		01/18/05	RLF	Yes	HEL	01/25/05	YES	AJP	3/5/2005
N-12_4.1	421212.1906	3863292.723	5.5	98.5	47.0			11/26/04	68		0	0	01/10/05	CD	0.25		nail	0	0			1	1		01/18/05	RLF	Yes	HEL	01/25/05	YES	AJP	3/5/2005
N-12_7	421212.1882	3863284.116	5.5	70.25	15.0		N-12_C12	11/26/04	32		0	0	01/10/05	CD		4	Nail					2	3		01/18/05	RLF	Yes	HEL	01/25/05	YES	AJP	3/5/2005

* 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)

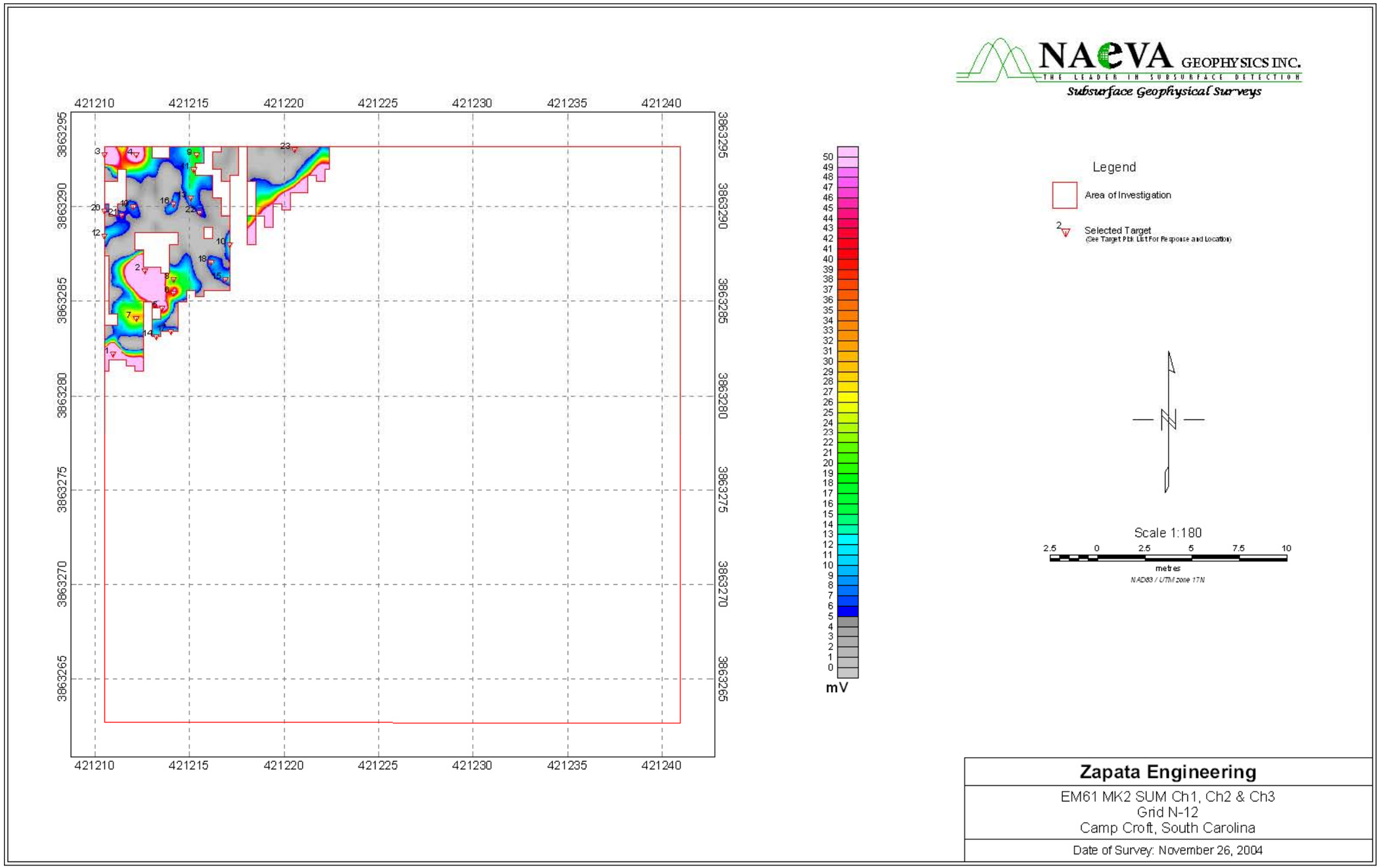
Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid N-12
Camp Croft, South Carolina

Date of Survey: November 26, 2004


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
421210
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421220
421225
421230
421235
421240
3863295
3863290
3863285
3863280
3863275
3863270
3863265
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
mV
Scale 1:180
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid N-12
Camp Croft, South Carolina
Date of Survey: November 26, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

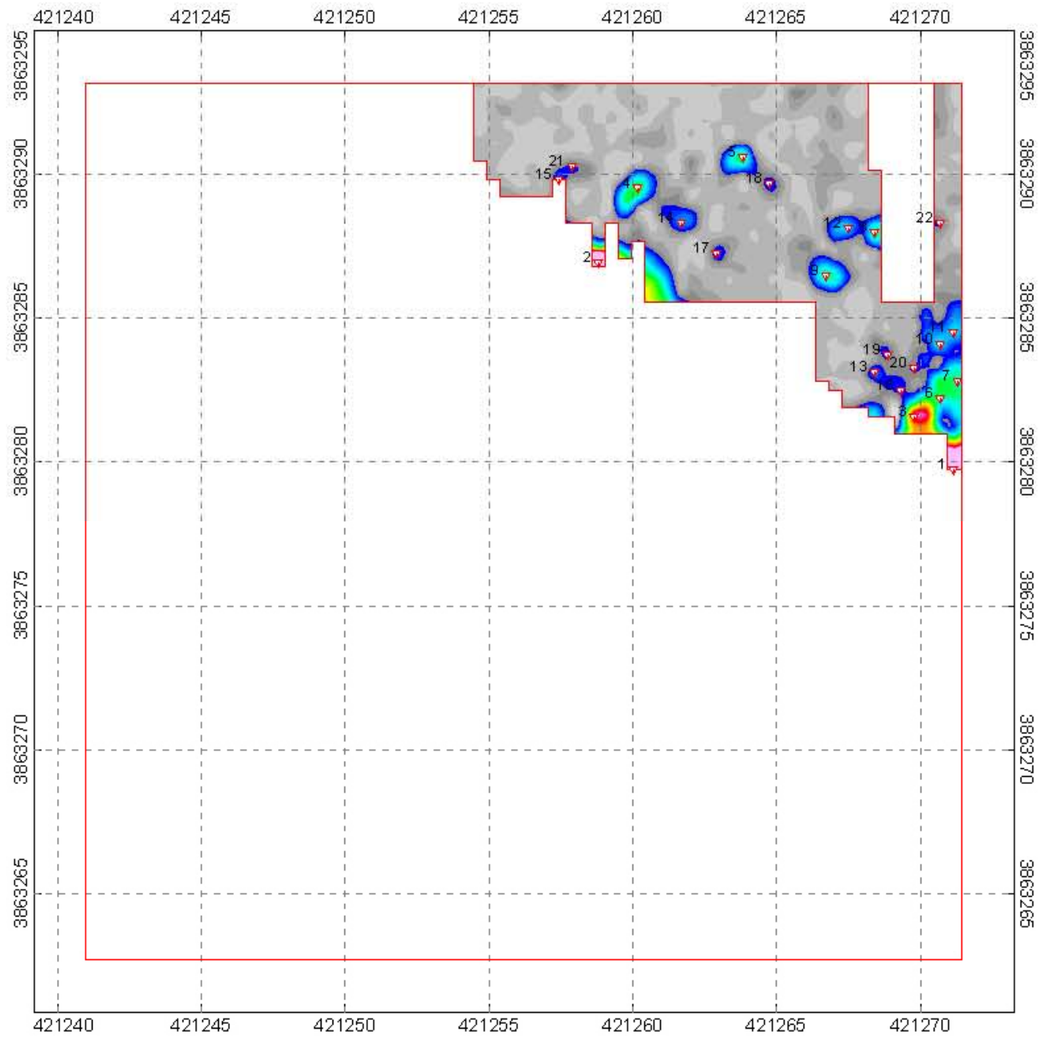
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: N13
Field Book ID:

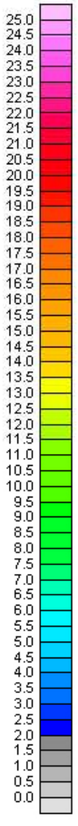
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
N-13_C1	421271.1451	3863279.758	99	56		154		11/26/04			0	0		CD			Elec wire					3	3		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-13_C11	421271.1464	3863284.48	99	71.5		5		11/26/04			0	0		CD			Nail					2	2		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-13_C12	421267.491	3863288.138	87	83.5		5		11/26/04			0	0		MD	0.25		M15 parts					0	0		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-13_C14	421261.7019	3863288.292	68	84		4		11/26/04			0	0		CD		2 x 2	Metal	0	-12			1	1		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-13_C17	421262.9204	3863287.225	72	80.5		3		11/26/04			0	0		CD		1 x 2	Metal	-12	0			4	4		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-13_C18	421264.7492	3863289.662	78	88.5		3		11/26/04			0	0		CD			Burn pit/nails					0	3		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-13_C21	421257.8938	3863290.273	55.5	90.5		2		11/26/04			0	0		CD			Gas cylinder					2	2		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-13_C22	421270.6904	3863288.289	97.5	84		2		11/26/04			0	0		CD			Chicken wire on post					0	0		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-13_C4	421260.1788	3863289.511	63	88		9		11/26/04			0	0		CD		8	Wire					0	3		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-13_C5	421263.8354	3863290.576	75	91.5		9		11/26/04			0	0		CD	0.5	5 x 5	Metal					1	2		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-13_C6	421270.6887	3863282.195	97.5	64		8		11/26/04			0	0		CD			Screen/nail/elec wire - LIP					6	6		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-13_C8	421268.4051	3863287.985	90	83		8		11/26/04			0	0		CD			Coat hanger	6	0			0	0		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-13_C9	421266.7289	3863286.462	84.5	78		7		11/26/04			0	0		MD	0.25		M15 parts	-21.21641	-21.21641			0	1		01/31/05	RLF	NA	DRA	02/22/06	YES	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)

Scale 1:180

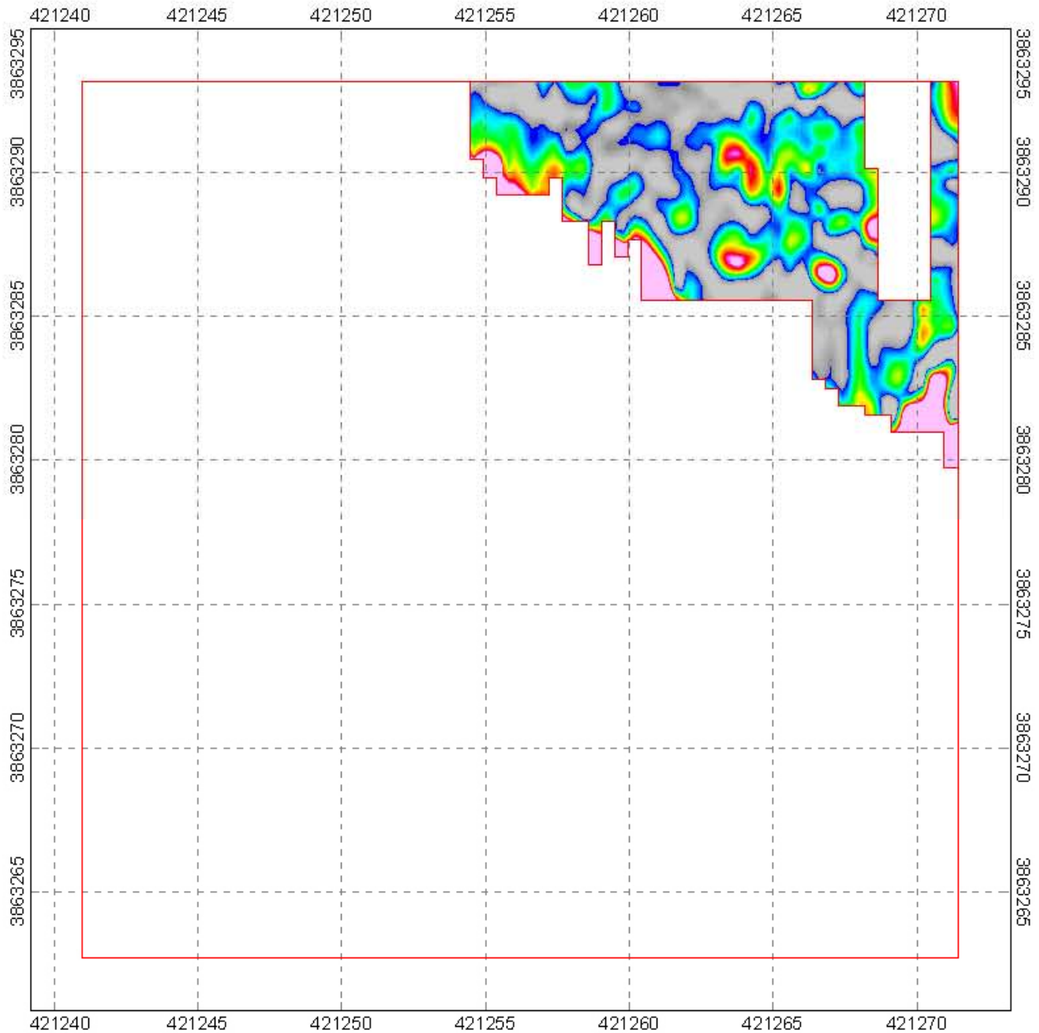
2.5 0 2.5 5 7.5 10
metres

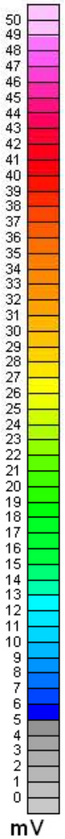
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid N-13
Camp Croft, South Carolina

Date of Survey: November 26, 2004





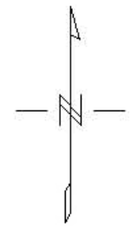
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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

Background Statistics exceed QC metric - See Grids N13_P13 Noise Estimates
No targets selected, this grid is outside teh Priority Area 40P .



Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid N-13
Camp Croft, South Carolina

Date of Survey: November 26, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

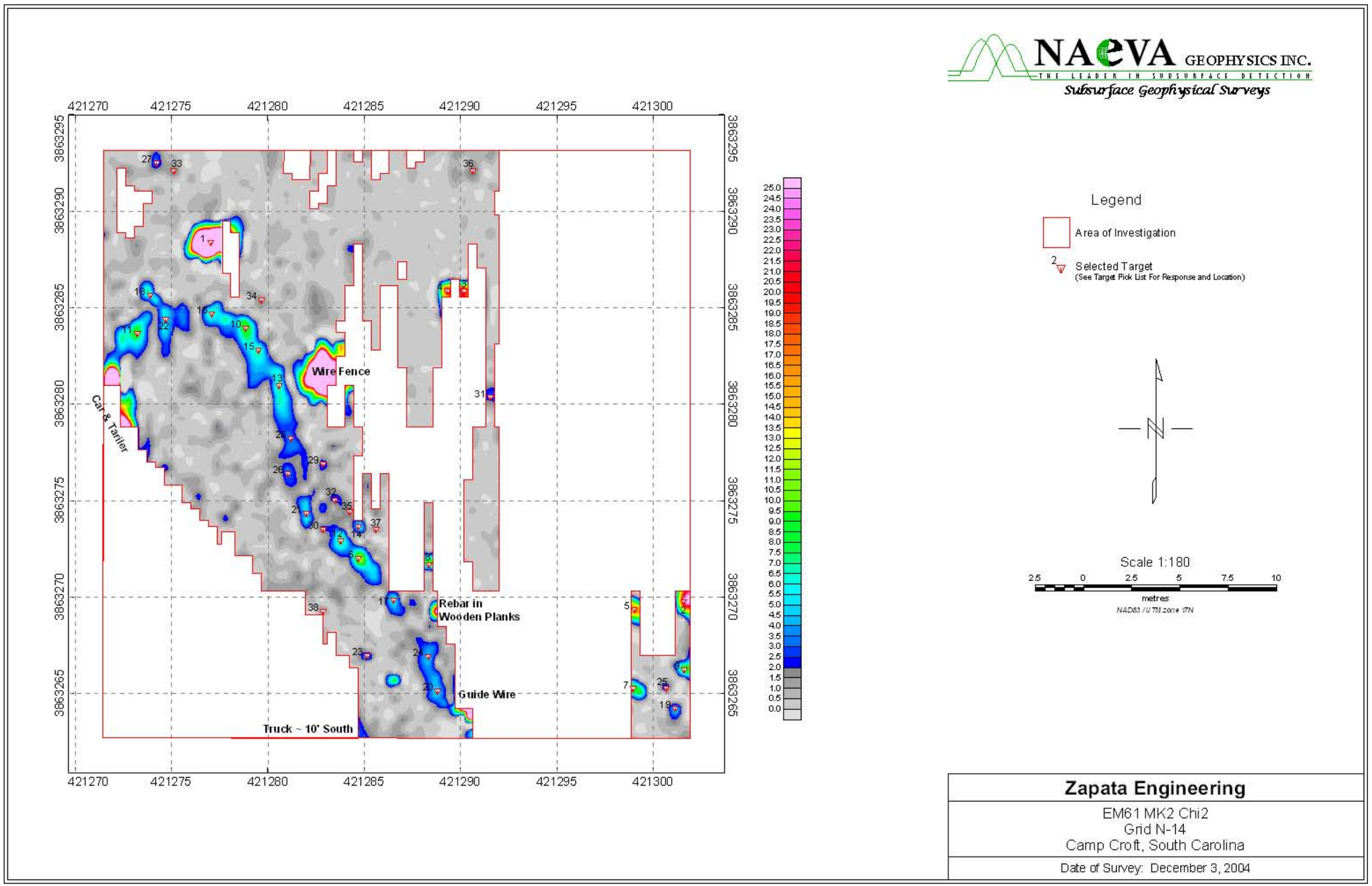
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: N14
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
N-14_C1	421277.0346	3863288.378	18.3216	84.2953		99		12/03/04			0	0		CD	0.25	120	Barb wire					0	0		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C10	421278.8469	3863283.938	24.2735	69.7273		10		12/03/04			0	0		CD			Brick - Elec wire hot - Shared with C15	0	24			0	1		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C11	421273.2187	3863283.665	5.802	68.8251		9		12/03/04			0	0		CD			Elec wire hot								01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C12	421283.788	3863272.899	40.5	33.5		8		12/03/04			0	0		CD			Elec wire hot								01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C13	421280.5909	3863280.974	30	60		8		12/03/04			0	0		CD			Rock - electric wire hot					6	6		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C14	421284.7023	3863273.66	43.5	36		7		12/03/04			0	0		CD			Elec wire hot								01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C15	421279.525	3863282.802	26.5	66		7		12/03/04			0	0		CD			Brick - Elec wire hot Shared with C10	0	24			0	1		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C16	421277.1027	3863284.681	18.5484	72.1648		7		12/03/04			0	0		CD			Brick - Elec wire hot								01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C17	421286.5294	3863269.851	49.5	23.5		7		12/03/04			0	0		CD		4	Nail (2)					3	5		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C18	421273.8928	3863285.634	8.0127	75.2871		6		12/03/04			0	0		CD			Nail - electric wire hot					4	4		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C19	421301.1532	3863264.211	97.5	5		6		12/03/04			0	0		CD			Brick/can					0	2		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C2	421301.6117	3863269.747	99	23.17		27		12/03/04			0	0		CD	0.25	60	Wire - Shared with N15-C7					0	1		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C20	421288.8107	3863265.15	56.9912	8.0721		5		12/03/04			0	0		CD			Elec wire hot					4	4		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C21	421282.011	3863274.35	34.6665	38.2606		5		12/03/04			0	0		CD			Elec wire hot								01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C22	421274.6869	3863284.407	10.6202	71.2625		5		12/03/04			0	0		CD			Elec wire hot								01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C23	421285.1575	3863266.957	45	14		4		12/03/04			0	0		GEO			Lost after dig					2	2		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C24	421288.3325	3863266.928	55.4202	13.9073		4		12/03/04			0	0		CD			Elec wire hot - white rock					2	2		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C25	421300.6964	3863265.277	96	8.5		4		12/03/04			0	0		CD	1		Metal bucket	0	36			2	2		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C26	421281.0467	3863276.404	31.5	45		4		12/03/04			0	0		CD			Nail	0	12			5	5		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C27	421274.2229	3863292.517	9.0902	97.8776		3		12/03/04			0	0		CD			Nails	0	18			0	1		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C28	421281.1951	3863278.212	31.9854	50.9347		3		12/03/04			0	0		CD			Nail - elec wire	0	18			3	3		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C29	421282.875	3863276.888	37.5	46.59		3		12/03/04			0	0		CD			Nail	12.729844	-12.72984			0	1		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C3	421290.19	3863285.847	61.5	76		25		12/03/04			0	0		GEO			White rocks	-18	0			0	5		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C30	421282.8741	3863273.509	37.5	35.5		3		12/03/04			0	0		CD			Elec hot wire								01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C31	421291.5597	3863280.362	66	58		3		12/03/04			0	0		CD			Trash - LIP	-24	0			0	1		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C32	421283.4839	3863275.032	39.5	40.5		3		12/03/04			0	0		CD			Nail	21.216407	21.216407			1	2		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C33	421275.1094	3863292.097	12	96.5		2		12/03/04			0	0		CD			Nails	0	-12			0	1		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C34	421279.678	3863285.392	27	74.5		2		12/03/04			0	0		CD			Nail	12.729844	12.729844			0	0		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C35	421284.2455	3863274.422	42	38.5		2		12/03/04			0	0		CD			Elec hot wire								01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C36	421290.6488	3863292.093	63	96.5		2		12/03/04			0	0		CD			Nails	0	24			1	1		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C37	421285.6163	3863273.508	46.5	35.5		2		12/03/04			0	0		CD			Coaxial cable connector					1	1		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C38	421282.8729	3863269.243	37.5	21.5		2		12/03/04			0	0		CD			Metal flakes					8	12		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C4	421289.3249	3863285.866	58.6606	76.0634		24		12/03/04			0	0		CD	0.5		Metal chunks	-18	0			4	6		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C5	421299.0354	3863269.37	90.5449	21.9298		16		12/03/04			0	0		CD			Can	-24	0			0	0		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C6	421284.7018	3863271.985	43.5	30.5		13		12/03/04			0	0		CD			Elec wire hot								01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C7	421298.9714	3863265.255	90.3385	8.4263		11		12/03/04			0	0		CD			Beer can					0	0		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C8	421288.3581	3863271.679	55.5	29.5		11		12/03/04			0	0		GEO			Rock					2	2		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-14_C9	421301.6265	3863266.249	99.0517	11.6886		10		12/03/04			0	0		CD			Brick	0	-12			1	3		01/31/05	RLF	NA	DRA	02/22/06	NO	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
421270
421275
421280
421285
421290
421295
421300
3863295
3863290
3863285
3863280
3863275
3863270
3863265
Wire Fence
Car & Trailer
Rebar in
Wooden Planks
Guide Wire
Truck ~ 10' South
25.0
24.5
24.0
23.5
23.0
22.5
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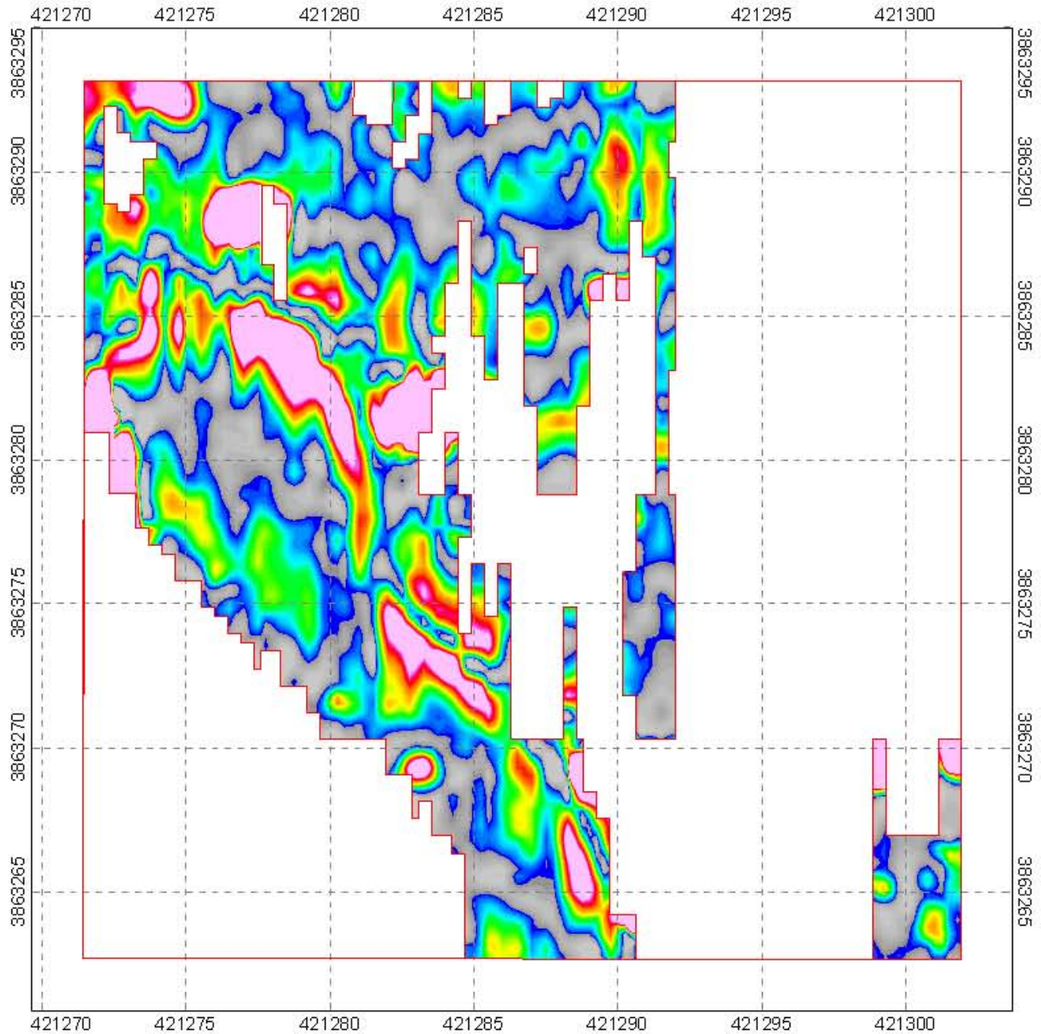
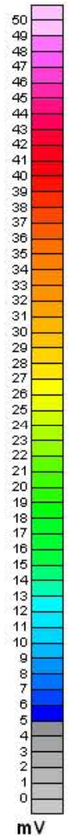
0.5
0.0
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
N
Scale 1:180
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid N-14
Camp Croft, South Carolina
Date of Survey: December 3, 2004





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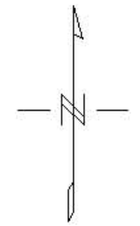
Subsurface Geophysical Surveys

Legend

Area of Investigation

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

Background Statistics exceed QC metric - See Grid N-14 Noise Estimates
No Targets Selected



Scale 1:180

2.5 0 2.5 5 7.5 10

metres

NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid N-14
Camp Croft, South Carolina

Date(s) of Survey: December 3, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: N15
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
N-15_C1	421327.8196	3863285.532	85	75		168	N-15_23	11/22/04			0	0		CD			License plate					4	4		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C10	421320.3522	3863276.698	60.5	46		18	N-15_73	11/22/04			0	0		CD			Aluminum can					0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C11	421315.0192	3863273.652	43	36		16	N-15_63	11/22/04			0	0		CD			Air filter					0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C12	421316.2392	3863277.918	47	50		16	N-15_50	11/22/04			0	0		CD			2 license plates	-8.486563	8.4865629			12	12		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C13	421304.3531	3863266.8	8	13.5		14	N-15_44	11/22/04			0	0		CD		144 x 0.5	1/2" wire rope - Shared with C5					0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C14	421307.2479	3863267.561	17.5	16		14	N-15_112	11/22/04			0	0		CD			Aluminum can					3	4		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C15	421322.3343	3863282.486	67	65		13	N-15_83	11/22/04			0	0		CD			Rusty can	-12.72984	-12.72984			6	6		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C17	421329.8002	3863286.141	91.5	77		10	N-15_43	11/22/04			0	0		CD	0.25	10 x 1	1" strap - Shared with C26	0	12			1	1		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C18	421304.9624	3863266.495	10	12.5		9	N-15_48	11/22/04			0	0		CD			Elec wire hot - LIP								02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C19	421302.2217	3863272.132	1	31		8	N-15_70	11/22/04			0	0		CD			Trash pit - LIP								02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C2	421329.3426	3863284.16	90	70.5		108	N-15_18	11/22/04			0	0		CD	2	72	3/8" rod					0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C20	421306.7912	3863268.779	16	20		8	N-15_106	11/22/04			0	0		CD			Aluminum can					0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C21	421314.2581	3863275.785	40.5	43		8	N-15_125	11/22/04			0	0		CD			Aluminum can	0	24			0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C22	421315.6318	3863285.535	45	75		8	N-15_41	11/22/04			0	0		CD		5	Wire	-24	0			5	5		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C23	421321.8755	3863276.24	65.5	44.5		8	N-15_113	11/22/04			0	0		CD			Aluminum can					2	2		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C24	421317.0031	3863286.092	49.5	76.83		7		11/22/04			0	0		CD	0.25		Banding	-36	0			5	5		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C26	421329.1674	3863286.462	89.4229	78.0528		7	N-15_46	11/22/04			0	0		CD		10 x 1	1" strap - Shared with C17	0	-18			1	1		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C27	421327.3612	3863280.504	83.5	58.5		6	N-15_156	11/22/04			0	0		GEO			Rock	0	0				9		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C27.1	421327.3612	3863280.504	83.5	58.5		6		11/22/04			0	0		CD			wire - LIP	0	0				4		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C28	421329.4903	3863266.64	90.5	13		6	N-15_115	11/22/04	28		0	0	01/22/05	CD			Barb wire - LIP					4	4		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-15_C29	421322.485	3863276.392	67.5	45		6	N-15_120	11/22/04			0	0		CD			Nail					2	2		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C3	421324.7724	3863284.771	75	72.5		68	N-15_28	11/22/04			0	0		CD			Guide wire - LIP								02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C32	421318.222	3863286.448	53.5	78		5	N-15_59	11/22/04			0	0		CD	1		Trash pit - LIP					18	18		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C33	421313.3436	3863274.414	37.5	38.5		5		11/22/04			0	0		CD	0.25	6	1/2 " channel	24	0			3	3		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C34	421307.864	3863292.545	19.5	98		5		11/22/04			0	0		CD		8	Banding	-12	0			2	2		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C35	421321.4194	3863279.44	64	55		5	N-15_180	11/22/04			0	0		MD	0.25		M15 top	36	0			0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C37	421325.686	3863283.095	78	67		5	N-15_144	11/22/04			0	0		CD		24	Wire	24	0			3	3		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C38	421308.3201	3863289.041	21	86.5		5	N-15_159	11/22/04			0	0		CD	2.5	84 x 0.6	5/8" wire rope	0	12			0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C39	421308.7767	3863287.213	22.5	80.5		5	N-15_193	11/22/04			0	0		CD		3 x 1	1" strap	0	12			1	1		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C4	421316.8476	3863274.413	49	38.5		62	N-15_39	11/22/04			0	0		CD			Aluminum can					1	1		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C40	421324.6205	3863286.447	74.5	78		4	N-15_37	11/22/04			0	0		CD			Rornell stake - LIP					12	12		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C41	421306.9498	3863291.936	16.5	96		4	N-15_74	11/22/04			0	0		CD		1.5	Metal grommet	24	0			4	5		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C42	421305.12	3863285.69	10.5	75.5		4	N-15_60	11/22/04			0	0		CD	0.25		Metal pieces	0	0				0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C42.1	421305.12	3863285.69	10.5	75.5		4		11/22/04			0	0		CD	0.25		Metal pieces	0	0				6		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C42.2	421305.12	3863285.69	10.5	75.5		4		11/22/04			0	0		CD	0.25		Metal pieces	0	0				4		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C43	421329.6487	3863289.035	91	86.5		4	N-15_99	11/22/04	39		0	0	01/22/05	CD		0.125	Wire - LIP	0	12			4	4		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-15_C44	421318.3711	3863274.413	54	38.5		4	N-15_143	11/22/04			0	0		CD		8	Dental tool - Shared with C16	0	-18						02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C45	421310.1467	3863283.099	27	67		4	N-15_64	11/22/04			0	0		CD			Can/barb wire - Shared with C46	24	0			8	8		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C46	421309.2328	3863283.709	24	69		4	N-15_215	11/22/04			0	0		CD			Can/barb wire - Shared with C45	0	-24						02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C47	421309.2316	3863279.291	24	54.5		4	N-15_96	11/22/04			0	0		CD	0.25		1/2 metal sphere	-18	0			18	20		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

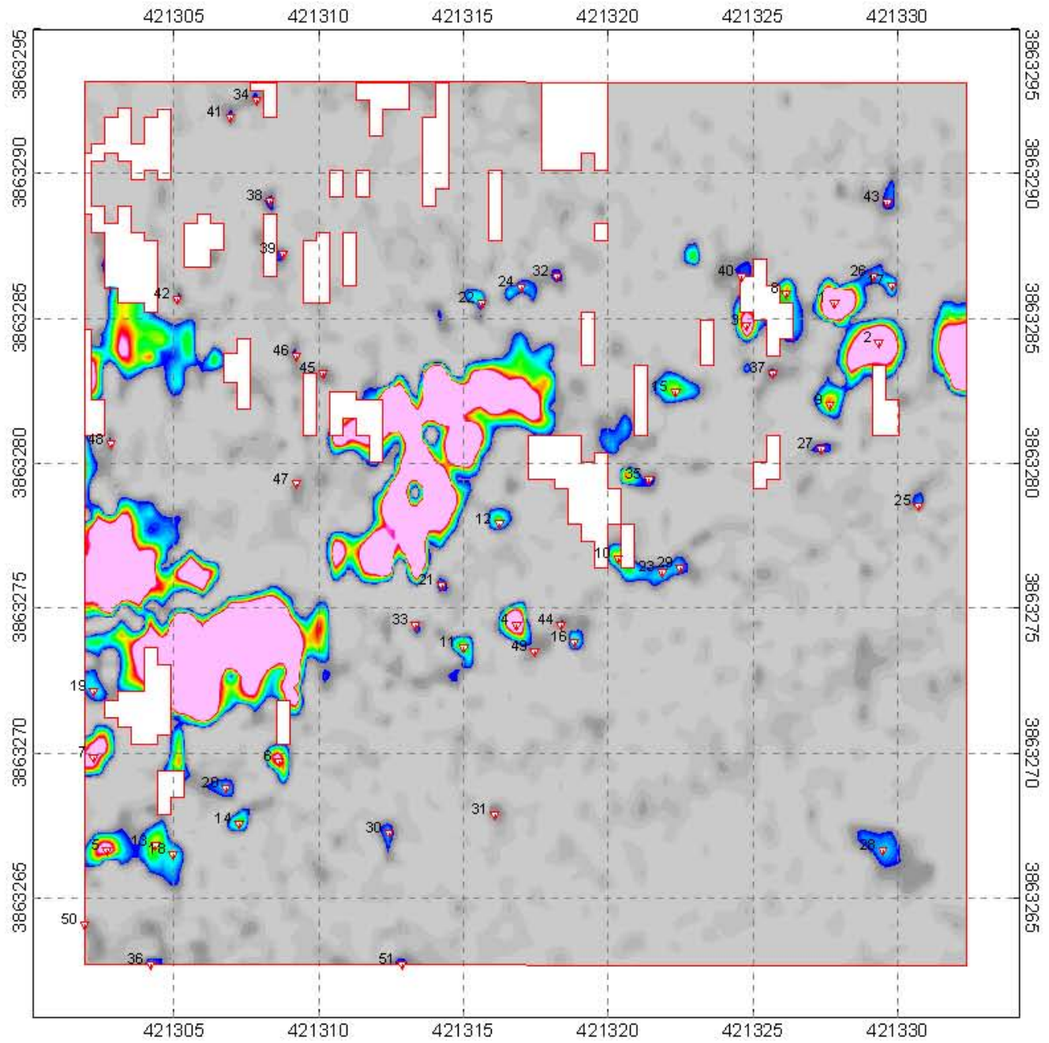
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: N15
Field Book ID:

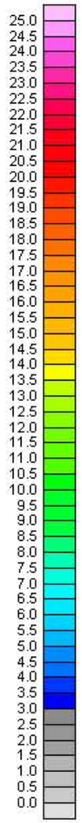
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
N-15_C48	421302.8334	3863280.663	3	59		4		11/22/04			0	0		CD	0.25		Metal pieces	0	12			1	1		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C48.1	421302.8334	3863280.663	3	59		4		11/22/04			0	0		CD	0.25		Metal pieces	12	0			1	1		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C48.2	421302.8334	3863280.663	3	59		4		11/22/04			0	0		CD	0.25		Metal pieces	-12	0			1	1		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C49	421317.4568	3863273.499	51	35.5		3	N-15_128	11/22/04			0	0		CD	0.25		Can					1	1		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C5	421302.6773	3863266.648	2.5	13		39	N-15_62	11/22/04			0	0		CD	5	144 x 0.5	1/2" wire rope - Shared with C13					0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C50	421301.9149	3863264.058	0	4.5		3		11/22/04			0	0		CD			Nail	18	0			2	2		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C6	421308.6196	3863269.693	22	23		34	N-15_55	11/22/04			0	0		CD			Aluminum can					4	4		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C7	421302.2211	3863269.847	1	23.5		33	N-15_32	11/22/04			0	0		CD	0.25	60	Wire - Shared with N14-C2								01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C8	421326.1438	3863285.837	79.5	76		26	N-15_51	11/22/04			0	0		CD			Guide wire - LIP								02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-15_C9	421327.6663	3863282.028	84.5	63.5		22	N-15_24	11/22/04			0	0		CD		4	Disk	0	12			2	2		02/01/05	RLF	NA	DRA	02/22/06	YES	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

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

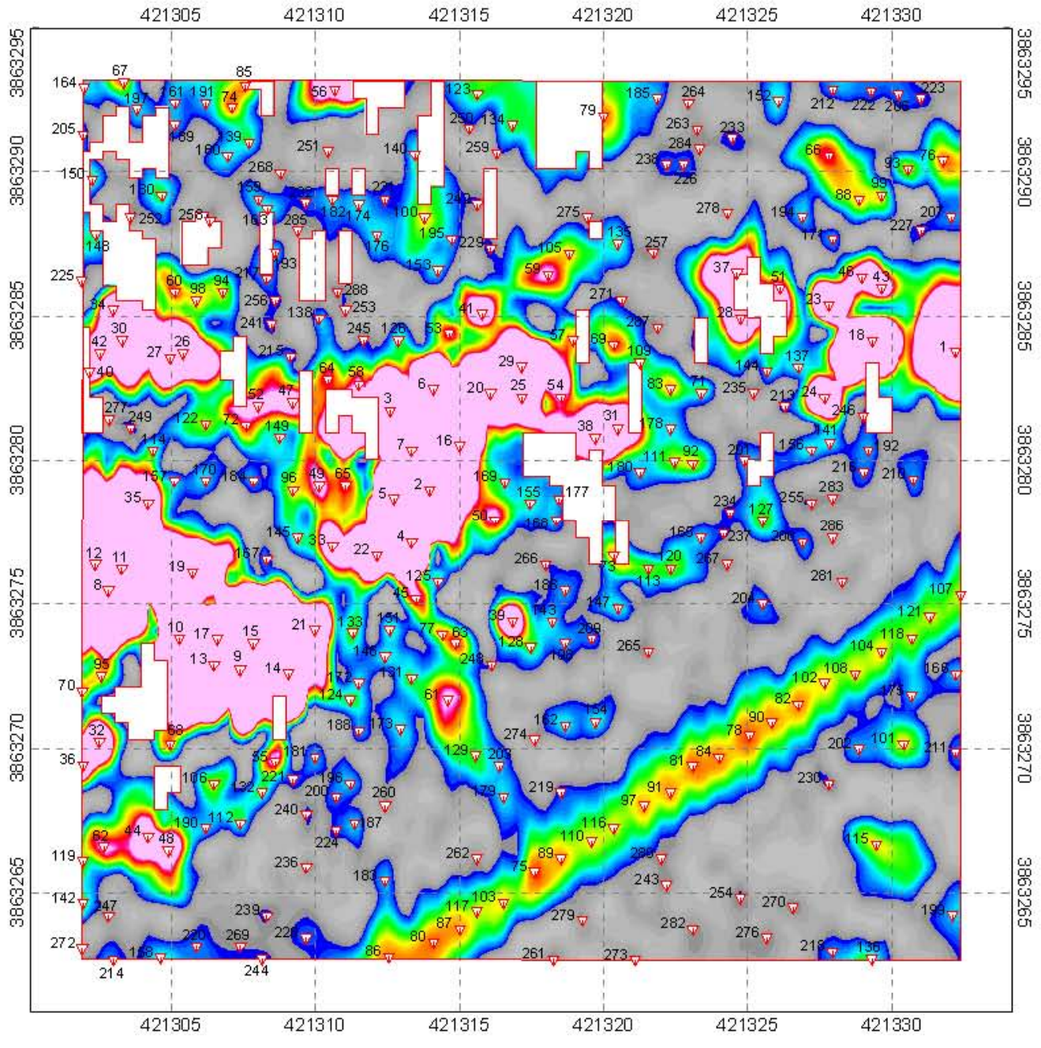
Scale 1:180

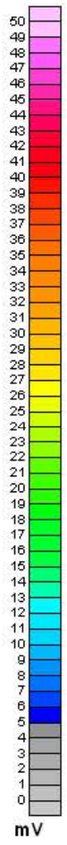
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid N-15
Camp Croft, South Carolina

Date of Survey: November 22, 2004





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)

Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid N-15
Camp Croft, South Carolina

Date(s) of Survey: November 22, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: N16
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
N-16_C1	421343.9694	3863289.826	38	90		21	N-16_42	11/22/04	45		0	0	01/22/05	MD			M15 parts / nail	0	0				6		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C1.1	421343.9694	3863289.826	38	90		21		11/22/04	45		0	0	01/22/05	CD	0.25		Bundle aluminum wire	0	0				1		01/26/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-16_C10	421358.5876	3863263.425	86	2.5		5	N-16_59	11/22/04	35		0	0	01/22/05	CD		3	Nail	0	-18			3	3		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C11	421341.0715	3863277.307	28.5	48.5		5	N-16_133	11/22/04	25		0	0	01/22/05	CD			1/2" pipe bushing	0	-24			1	1		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C12	421338.9381	3863275.347	21.5	42		5	N-16_88	11/22/04	25		0	0	01/22/05	GEO			Brick/hot rock	0	-12			0	2		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C13	421354.0187	3863269.008	71	21		5	N-16_85	11/22/04	12		0	0	01/22/05	CD			Barb wire - LIP					5	5		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C14	421343.8177	3863292.089	37.5	97.5		5	N-16_23	11/22/04	25		0	0	01/22/05	CD			Survey spike - LIP	24	0						01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C15	421337.1096	3863273.99	15.5	37.5		4	N-16_92	11/22/04	17		0	0	01/22/05	CD		2 x 4	Metal	-12	0			3	3		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C16	421336.5007	3863275.951	13.5	44		4	N-16_115	11/22/04	4		0	0	01/22/05	CD			Asphalt - 2 x 2 x 1 hole								01/26/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
N-16_C17	421332.3912	3863290.231	0	91.33		4	N-16_47	11/22/04	50		0	0	01/22/05	CD			Welding rod					4	4		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C18	421356.4569	3863271.42	79	29		4	N-16_43	11/22/04	30		0	0	01/22/05	MD			M15	0	10			4	5		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C19	421337.4191	3863291.94	16.5	97		4		11/22/04	83		0	0	01/22/05	CD		0.188	Welding rod	0	12			1	1		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C2	421352.6503	3863279.114	66.5	54.5		15	N-16_26	11/22/04	59		0	0	01/22/05	CD			Rebar - LIP					2			01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C20	421360.1127	3863269.609	91	23		4	N-16_40	11/22/04	42		0	0	01/22/05	CD	0.25		Paint can - LIP	-12	0			11	14+		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C21	421353.4129	3863282.131	69	64.5		3	N-16_210	11/22/04	13		0	0	01/22/05	NC			2 x 2 x 1 hole								01/26/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
N-16_C22	421350.82	3863271.12	60.5	28		3	N-16_99	11/22/04	20		0	0	01/22/05	CD			1" banding - LIP					30	30		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C23	421358.5934	3863284.844	86	73.5		3	N-16_44	11/22/04	35		0	0	01/22/05	CD			Nail	0	0			2	2		01/26/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
N-16_C23.1	421358.5934	3863284.844	86	73.5		3		11/22/04	35		0	0	01/22/05	CD			Nail	0	0			2	2		01/26/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
N-16_C23.2	421358.5934	3863284.844	86	73.5		3		11/22/04	35		0	0	01/22/05	CD			Nail	0	0			2	2		01/26/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
N-16_C24	421361.1794	3863270.665	94.5	26.5		3		11/22/04	26		0	0	01/22/05	CD			Barb wire - LIP	0	-12			36	36+		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C25	421348.381	3863265.691	52.5	10		3	N-16_64	11/22/04	24		0	0	01/22/05	MD/CD	0.5		M15 top/M15 shoe	12	0						01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C26	421347.1688	3863290.278	48.5	91.5		3		11/22/04	23		0	0	01/22/05	CD	0.25		Nail	0	-24			3	3		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C26.1	421347.1688	3863290.278	48.5	91.5		3		11/22/04	23		0	0	01/22/05	CD	0.25		wire	-24	0			3	3		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C27	421362.098	3863287.257	97.5	81.5		3	N-16_107	11/22/04	3		0	0	01/22/05	CD			Edge of road								01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C28	421350.6732	3863291.634	60	96		3	N-16_68	11/22/04	35		0	0	01/22/05	CD		1 x 1	Metal					0	0		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C29	421339.7038	3863290.129	24	91		3	N-16_29	11/22/04	45		0	0	01/22/05	CD			Welding rod	-12	0			10	10		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C3	421334.5245	3863291.941	7	97		12	N-16_22	11/22/04	200		0	0	01/22/05	CD		1 x 1	Metal/nail (7) - LIP	0	-18			0	3		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C31	421356.9144	3863273.079	80.5	34.5		3	N-16_60	11/22/04	24		0	0	01/22/05	CD		4	Barb wire/nails - LIP	0	-18			5	5+		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C32	421360.1132	3863271.268	91	28.5		3		11/22/04	19		0	0	01/22/05	CD	0.25	30	Barb wire	-16.97313	16.973126			24	24+		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C34	421356.3052	3863273.834	78.5	37		3	N-16_94	11/22/04	12		0	0	01/22/05	CD	0.25	30	Barb wire	0	0			12	12		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C34.1	421356.3052	3863273.834	78.5	37		3		11/22/04	12		0	0	01/22/05	CD	0.25	30	Barb wire	0	0			12	12		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C35	421339.243	3863276.252	22.5	45		3	N-16_186	11/22/04	15		0	0	01/22/05	NC			2 x 2 x 1 hole								01/26/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
N-16_C36	421357.5219	3863266.292	82.5	12		3	N-16_36	11/22/04	50		0	0	01/22/05	CD			Burn pit, trash - LIP					24	24+		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C37	421341.5315	3863288.318	30	85		3	N-16_219	11/22/04	18		0	0	01/22/05	CD			Welding rod	24	0			8	8		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C38	421336.4999	3863272.783	13.5	33.5		3		11/22/04	5		0	0	01/22/05	CD		4	Nail	24	0			3	3		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C39	421361.9415	3863271.72	97	30		3	N-16_37	11/22/04	45		0	0	01/22/05	CD			Wire - LIP					36	36+		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C4	421349.7591	3863291.484	57	95.5		10	N-16_38	11/22/04	25		0	0	01/22/05	CD			Coax cable - LIP	0	-24			4	4		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C40	421353.8685	3863277.002	70.5	47.5		2	N-16_166	11/22/04	5		0	0	01/22/05	CD	0.25	24 x 0.25	Barb wire - LIP B-wire at 30 - 36"	0	-24			5	5		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C41	421362.0977	3863286.201	97.5	78		2	N-16_167	11/22/04	2		0	0	01/22/05	NC			2 x 2 x 1 hole								01/26/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
N-16_C42	421362.5504	3863270.212	99	25		2	N-16_61	11/22/04	10		0	0	01/22/05	CD			Barb wire - LIP	-18	0			24	24		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

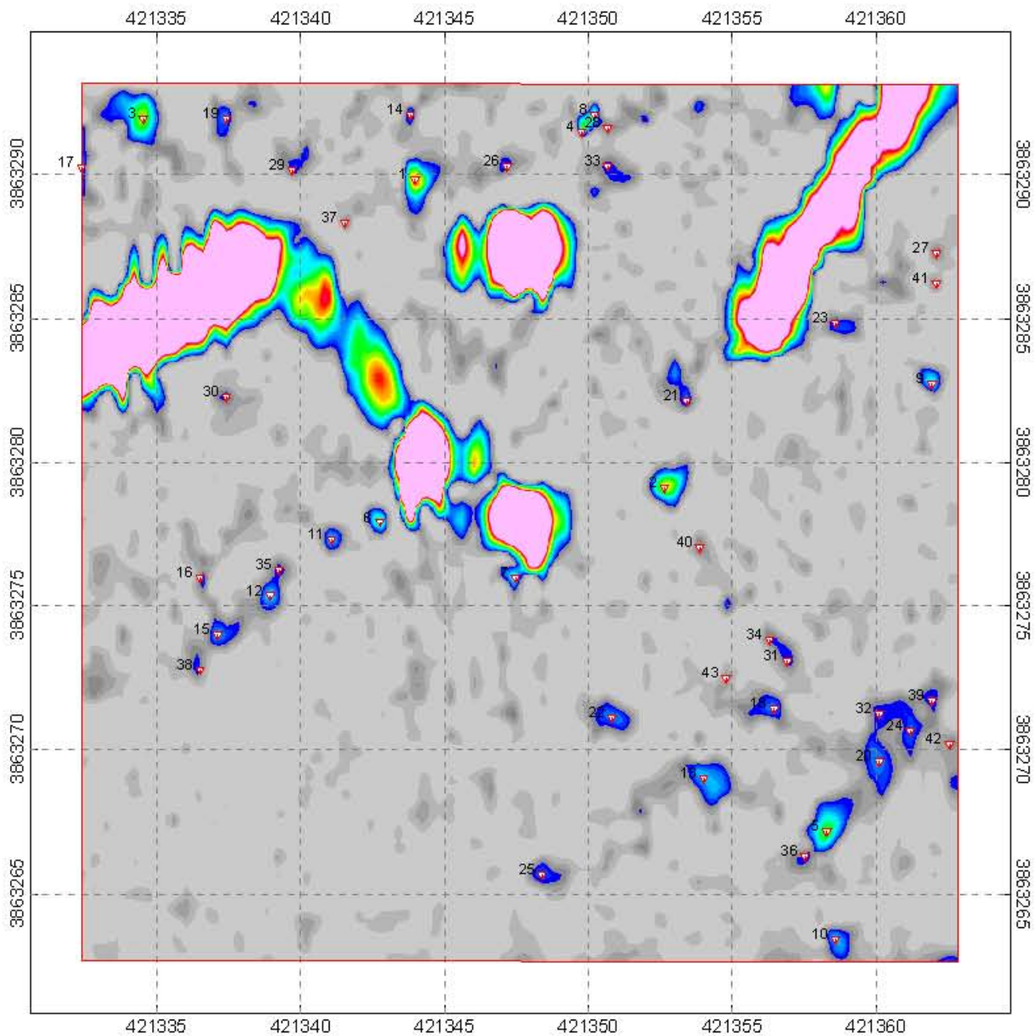
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: N16
Field Book ID:

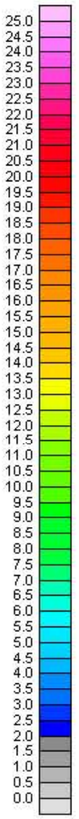
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
N-16_C43	421354.7814	3863272.477	73.5	32.5		2	N-16_54	11/22/04	16		0	0	01/22/05	CD	2	12	Rommel spike					12	14		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C5	421358.2839	3863267.196	85	15		9	N-16_28	11/22/04	78		0	0	01/22/05	CD	0.5		5 gallon pail - LIP					20	24+		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C6	421342.7475	3863277.91	34	50.5		8	N-16_80	11/22/04	23		0	0	01/22/05	CD	2		Flat wire - small pieces LIP	0	-24			12	12		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C7	421347.4697	3863275.948	49.5	44		8		11/22/04	75		0	0	01/22/05	CD			Rebar - LIP	0	12			2			01/26/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
N-16_C8	421350.2163	3863292.087	58.5	97.5		7	N-16_49	11/22/04	23		0	0	01/22/05	CD	2		Trash - LIP					36	36+		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-16_C9	421361.9444	3863282.732	97	66.5		6	N-16_116	11/22/04	21		0	0	01/22/05	CD			Aluminum can					6	6		01/26/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005

* 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)

N

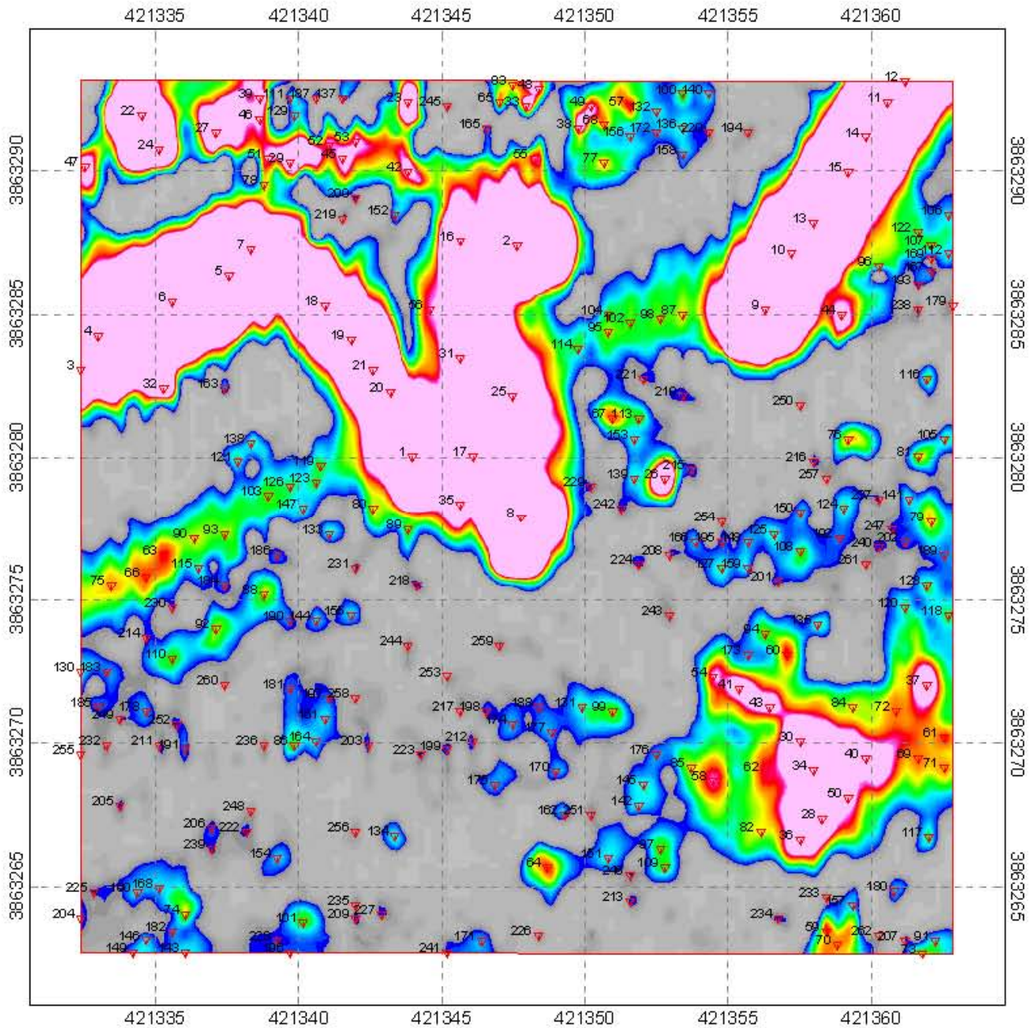
Scale 1:180

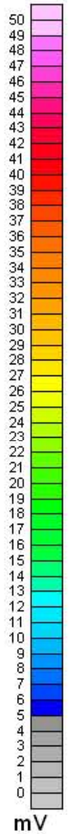
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid N-16
Camp Croft, South Carolina

Date of Survey: November 22, 2004





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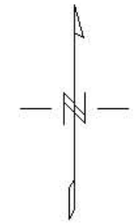

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NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid N-16
Camp Croft, South Carolina

Date of Survey: November 22, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

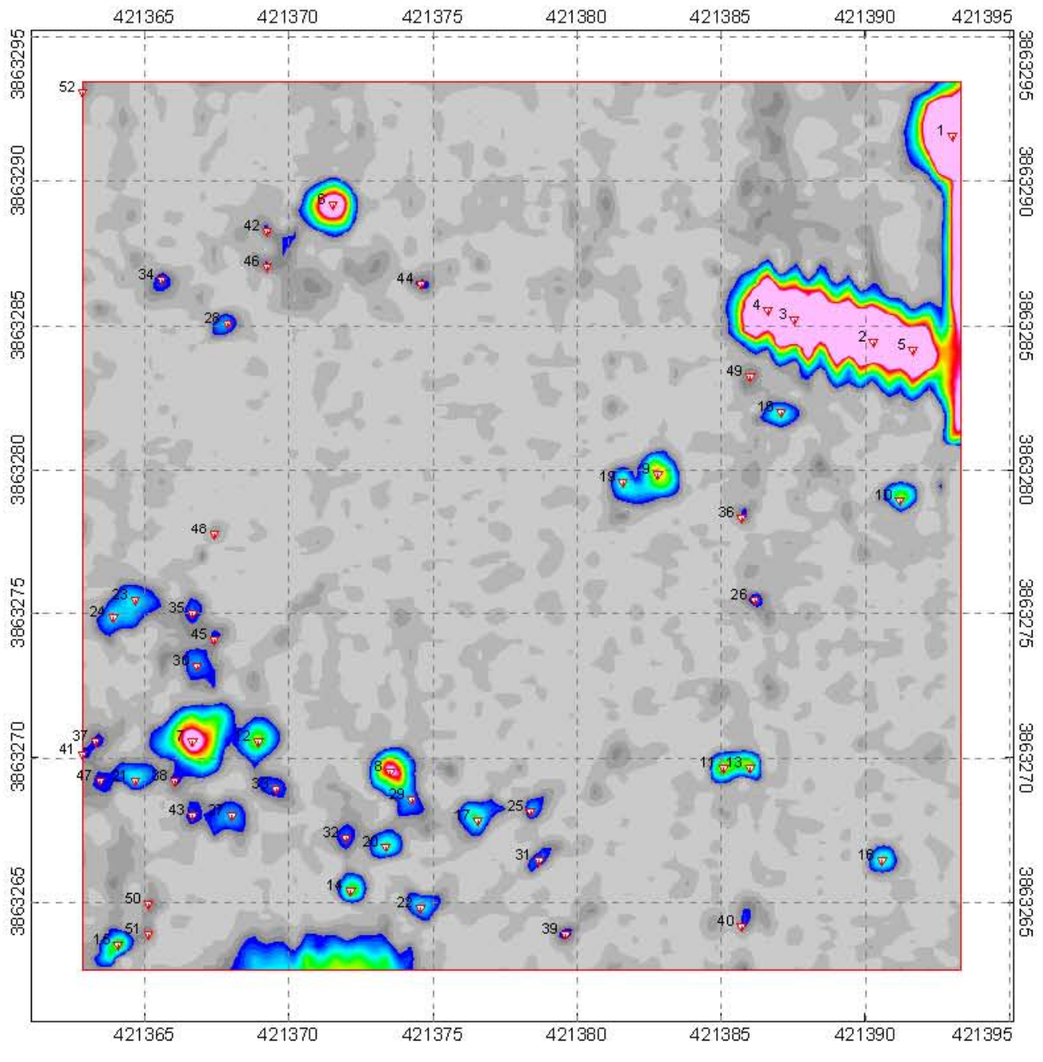
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: N17
Field Book ID:

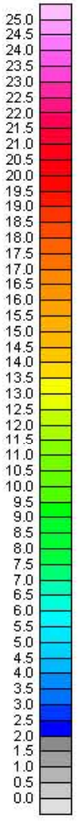
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
N-17_C10	421391.1939	3863278.964	93	53.5		13	N-17_24	12/01/04	45		0	0	01/20/05	CD	0.25	4 x 3	Flat aluminum can					2	2		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C12	421368.9491	3863270.59	20	26		12	N-17_12	12/01/04	70		0	0	01/20/05	CD	4	4 x 1	Pipe	-5	0			12	12		01/25/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
N-17_C14	421372.147	3863265.41	30.5	9		11	N-17_10	12/01/04	102		0	0	01/20/05	CD	0.75	8 x 0.5	Square rod					12	14		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C16	421390.5812	3863266.471	91	12.5		10	N-17_40	12/01/04	22		0	0	01/20/05	CD	0.25	1 x 0.5	Metal	-6.364922	-6.364922			2	2		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C17	421376.5657	3863267.846	45	17		9	N-17_26	12/01/04	31		0	0	01/20/05	CD	0.25	2 x 0.125	Nail	-4.243281	-4.243281			1	1		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C19	421381.5963	3863279.575	61.5	55.5		8	N-17_15	12/01/04	50		0	0	01/20/05	CD	2	27 x 0.5	Rebar	9.9009901	-9.90099			2	2		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C20	421373.3662	3863266.933	34.5	14		8	N-17_33	12/01/04	30		0	0	01/20/05	CD	0.25	2 x 0.125	Old nail	9.9009901	9.9009901			0	0		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C21	421364.683	3863269.22	6	21.5		7	N-17_27	12/01/04	30		0	0	01/20/05	MD	0.5	5 x 3 x 3	M15 WP grenade - O/E scrap					12	14		01/25/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C22	421374.5844	3863264.8	38.5	7		6	N-17_37	12/01/04	36		0	0	01/20/05	MD	1	4 x 3.5	M15 WP grenade - O/E scrap	6	0	E	35	12	14		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C23	421364.6847	3863275.467	6	42		6	N-17_18	12/01/04	32		0	0	01/20/05	CD	0.5		10 pieces barb wire					8	9		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C24	421363.9228	3863274.857	3.5	40		5	N-17_25	12/01/04	25		0	0	01/20/05	CD	0.5		12 pieces barb wire					8	9		01/24/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
N-17_C25	421378.3939	3863268.15	51	18		5	N-17_67	12/01/04	10		0	0	01/20/05	CD	0.25	2 x 0.125	3 nails	-12.72984	-12.72984			1	1		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C27	421368.0343	3863268.001	17	17.5		4	N-17_30	12/01/04	28		0	0	01/20/05	CD	0.5	4 x 1	Wire	9.9009901	-9.90099			2	2.5		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C28	421367.8866	3863285.063	16.5	73.5		4	N-17_61	12/01/04	17		0	0	01/20/05	CD	0.25	2.5 x 0.125	Old nail	6.3649222	6.3649222			4	4		01/24/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
N-17_C29	421374.2807	3863268.572	37.5	19.38		4		12/01/04	26		0	0	01/20/05	CD	0.25	2 x 0.125	Nails (3)	-8	0			1	1		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C30	421366.8169	3863273.181	13	34.5		4	N-17_48	12/01/04	16		0	0	01/20/05	CD	0.25	4	Barb wire	-6	0			6	6		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C31	421378.6982	3863266.475	52	12.5		4	N-17_63	12/01/04	14		0	0	01/20/05	GEO	0.25	2 x 1 x 1	Geo rock	0	-8			1	2		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C32	421371.9951	3863267.238	30	15		3	N-17_53	12/01/04	13		0	0	01/20/05	CD	0.25	2 x 0.125	Old nail	-1	0			2	3		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C33	421369.558	3863268.914	22	20.5		3	N-17_17	12/01/04	25		0	0	01/20/05	CD	2	28 x 0.5	Rebar					24	24		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C34	421365.6018	3863286.587	9	78.5		3	N-17_107	12/01/04	11		0	0	01/20/05	GEO	20	13 x 6 x 6	Geo rock	0	-8			2	5		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C35	421366.6651	3863275.009	12.5	40.5		3	N-17_57	12/01/04	13		0	0	01/20/05	CD	0.5	3 x 3	Burned metal - 8 pieces burned non-O/E scrap					12	15		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C36	421385.7093	3863278.356	75	51.5		3	N-17_14	12/01/04	60		0	0	01/20/05	CD	0.25	1 x 1 x 0.125	Metal	4.2432815	4.2432815			1	1		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C37	421363.3123	3863270.592	1.5	26		3	N-17_35	12/01/04	12		0	0	01/20/05	CD	0.5	24	Barb wire	8	0			9	9		01/25/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C38	421366.0541	3863269.22	10.5	21.5		3		12/01/04	53		0	0	01/20/05	MD	0.5	6 x 4 x 1	M15 WP grenade - O/E scrap w/5 gallon paint bucket lid and 2 each 5'x 1" dia pipes @ 2' under grenade					12	13		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C39	421379.6115	3863263.884	55	4		3	N-17_120	12/01/04	8		0	0	01/20/05	GEO	5	6 x 4 x 2	Geo rock	-9.90099	9.9009901			1	2		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C4	421386.6253	3863285.516	78	75		131	N-17_3	12/01/04	2400		0	0	01/20/05	CD		4 x 10	12" diameter culvert - runs under driveway entrance								01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C42	421369.2585	3863288.262	21	84		2.7435753		12/01/04	8		0	0	01/20/05	GEO		2 x 2 x 1	Geo soil/rock bed - outside boundaries					0	6		01/24/05	DRG	Yes	HEL	01/26/05	YES	DRA	02/21/06
N-17_C43	421366.6632	3863268.001	12.5	17.5		3	N-17_29	12/01/04	25		0	0	01/20/05	CD	0.25	3 x 0.5	Wire/nail	0	-13			2	2		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C44	421374.5902	3863286.433	38.5	78		3	N-17_118	12/01/04	13		0	0	01/20/05	GEO	0.5	3 x 2 x 1	Geo rock	3.5360679	-3.536068			2	2.5		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C45	421367.4266	3863274.095	15	37.5		3	N-17_62	12/01/04	12		0	0	01/20/05	CD	0.5	18	Barb wire					6	6		01/25/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C46	421369.2582	3863287.044	21	80		3		12/01/04	8		0	0	01/20/05	CD	0.25	2.5 x 0.125	Nail	0	6			0	1		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C47	421363.4642	3863269.221	2	21.5		2	N-17_36	12/01/04	20		0	0	01/20/05	MD	0.5	2.5 x 1	M15 WP grenade - top of grenade - O/E scrap					3	3.5		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N 17_C49	421386.0163	3863283.231	76	67.5		2	N 17_31	12/01/04	41		0	0	01/20/05	CD	0.25	3 x 1 x 0.125	Auto part	0	10			1	1.5		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C7	421366.6639	3863270.591	12.5	26		36	N-17_8	12/01/04	233		0	0	01/20/05	CD	4	4 x 1	Pipe	0	-10			18	18		01/25/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C8	421373.5192	3863269.523	35	22.5		28	N-17_7	12/01/04	400		0	0	01/20/05	CD	0.25	2 x 0.25	Old nails	-6	0			10	10		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005
N-17_C9	421382.8151	3863279.88	65.5	56.5		15	N-17_11	12/01/04	134		0	0	01/20/05	CD	2	27 x 0.5	Rebar	-8.486563	-8.486563			2	2		01/24/05	DRG	Yes	HEL	01/26/05	YES	AJP	3/5/2005

* 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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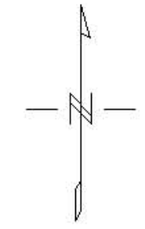

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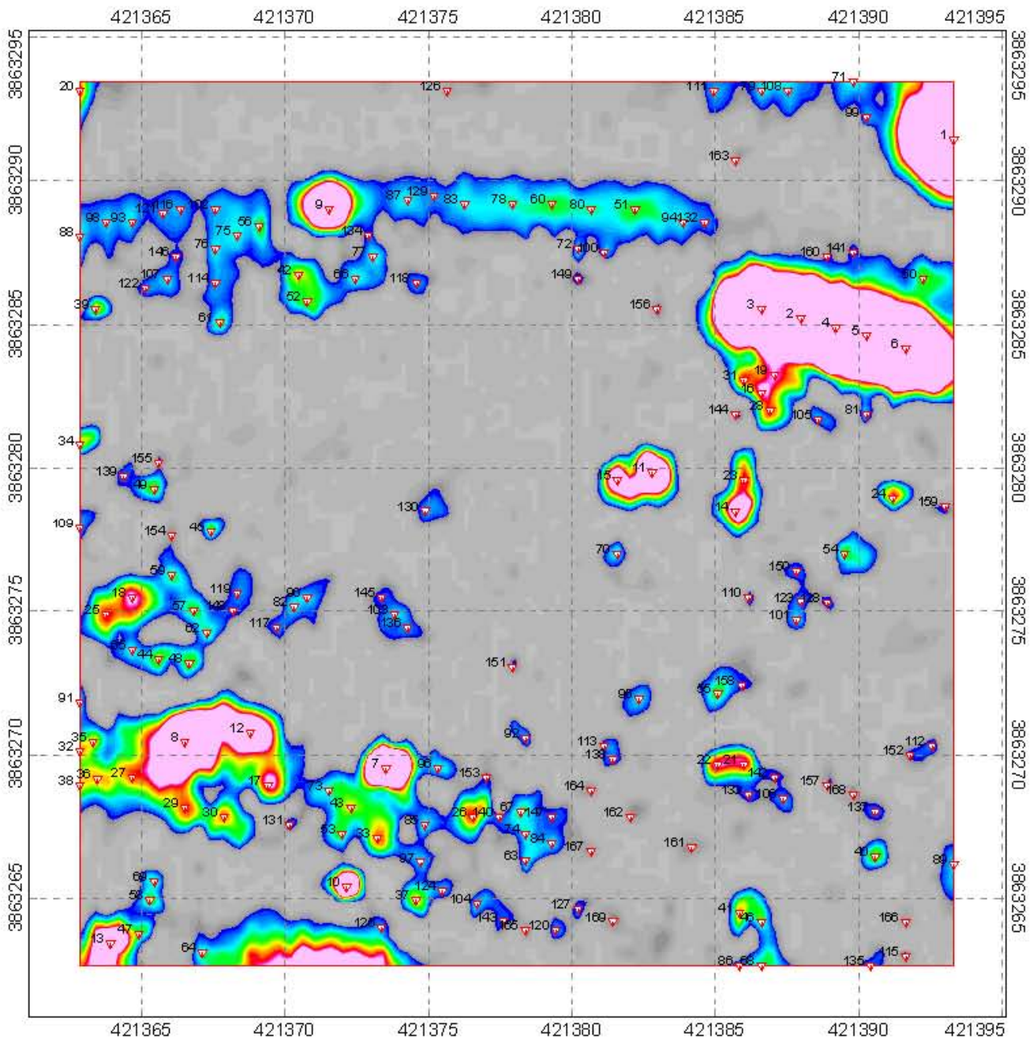
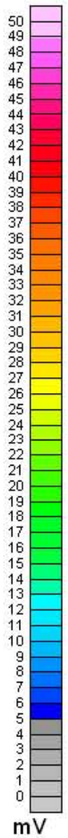
Zapata Engineering

EM61 MK2 Chi2
Grid N-17
Camp Croft, South Carolina

Date of Survey: December 1, 2004





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EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid N-17
Camp Croft, South Carolina

Date of Survey: December 1, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: N18
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
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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		
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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)	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
N-18_C10	421406.5888	3863274.853	43.5	40		5	N-18_35	12/01/04	19		0	0	01/20/05	CD	0.25	2 x 0.125	Old nail	0	-7			5	5		01/26/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-18_C11	421394.2385	3863265.329	3	8.75		4	N-18_3	12/01/04	70		0	0	01/20/05	CD			Rommel stake - Left in place								01/26/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-18_C12	421396.5352	3863282.624	10.5	65.5		4	N-18_8	12/01/04	25		0	0	01/20/05	CD	0.25	8 x 0.5	Metal strip	0	7			2	2		01/26/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-18_C2	421404.0004	3863278.815	35	53		35	N-18_2	12/01/04	160		0	0	01/20/05	MD	0.75	7 x 4	M15 grenade	4	0			3	3		01/26/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-18_C4	421405.3711	3863277.291	39.5	48		21	N-18_4	12/01/04	65		0	0	01/20/05	MD	0.5	5 x 3 x 1	M15 grenade	7.0721358	-7.072136			2	2.5		01/26/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-18_C5	421406.2859	3863278.053	42.5	50.5		12	N-18_4	12/01/04	76		0	0	01/20/05	MD	1.5	5 x 10	M15 grenade - 4 parts grenade body					3	4		01/26/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-18_C6	421402.0197	3863279.577	28.5	55.5		11	N-18_7	12/01/04	45		0	0	01/20/05	MD	0.25	5 x 1.5	M15 grenade	-10	0			3	3		01/26/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-18_C7	421395.1639	3863283.082	6	67		9	N-18_5	12/01/04	61		0	0	01/20/05	GEO	2	4 x 4	Geo rock	-5	0			2	3		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
N-18_C8	421407.5044	3863276.831	46.5	46.49		8	N-18_17	12/01/04	31		0	0	01/20/05	MD	0.25	4 x 1	M15 grenade	-2.828854	-2.828854			2	2		01/26/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
N-18_C9	421396.8384	3863280.034	11.5	57		6	N-18_30	12/01/04	15		0	0	01/20/05	CD	0.25	2.5 x 1	Muffler cover	3	0			0	0.5		01/26/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005

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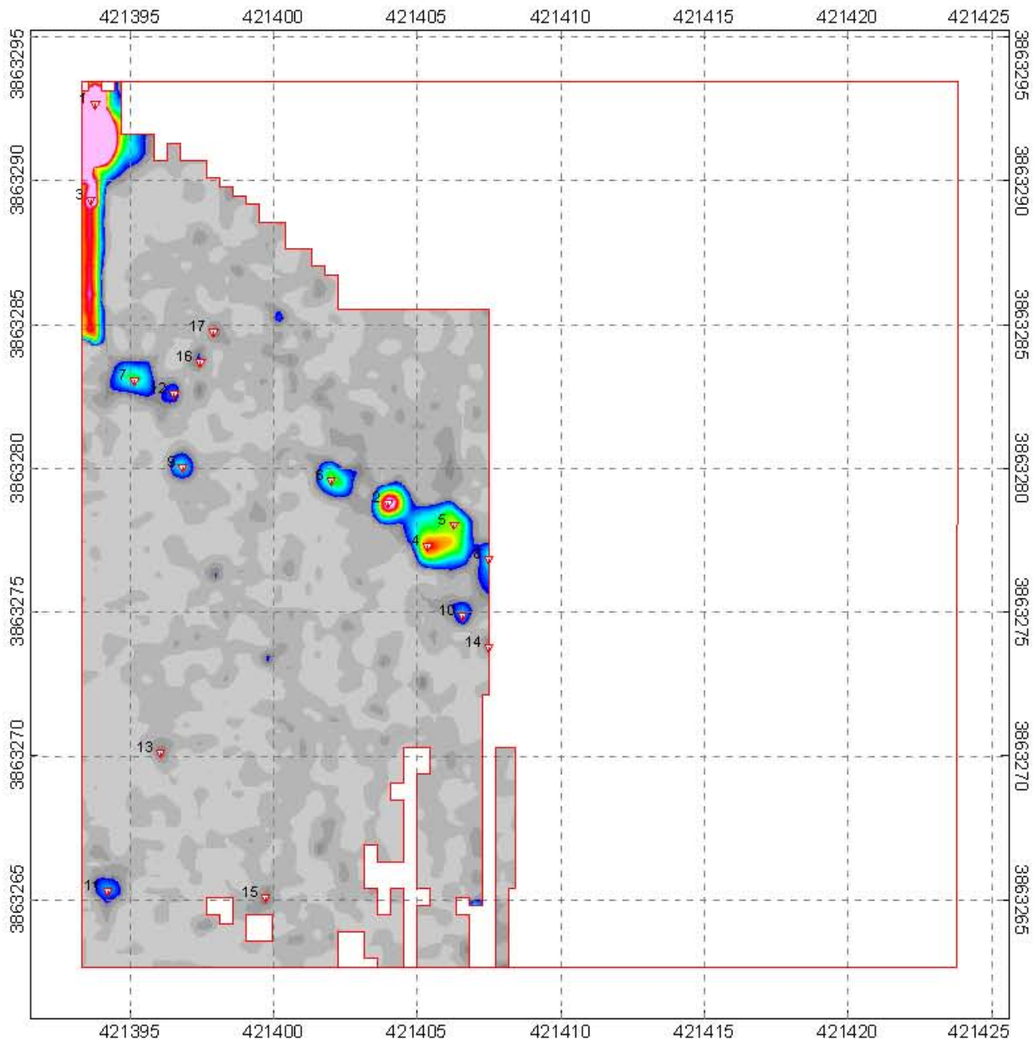
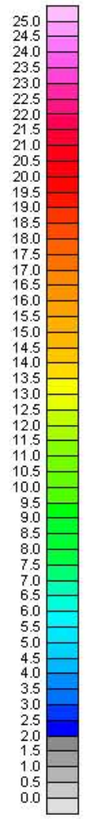




NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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

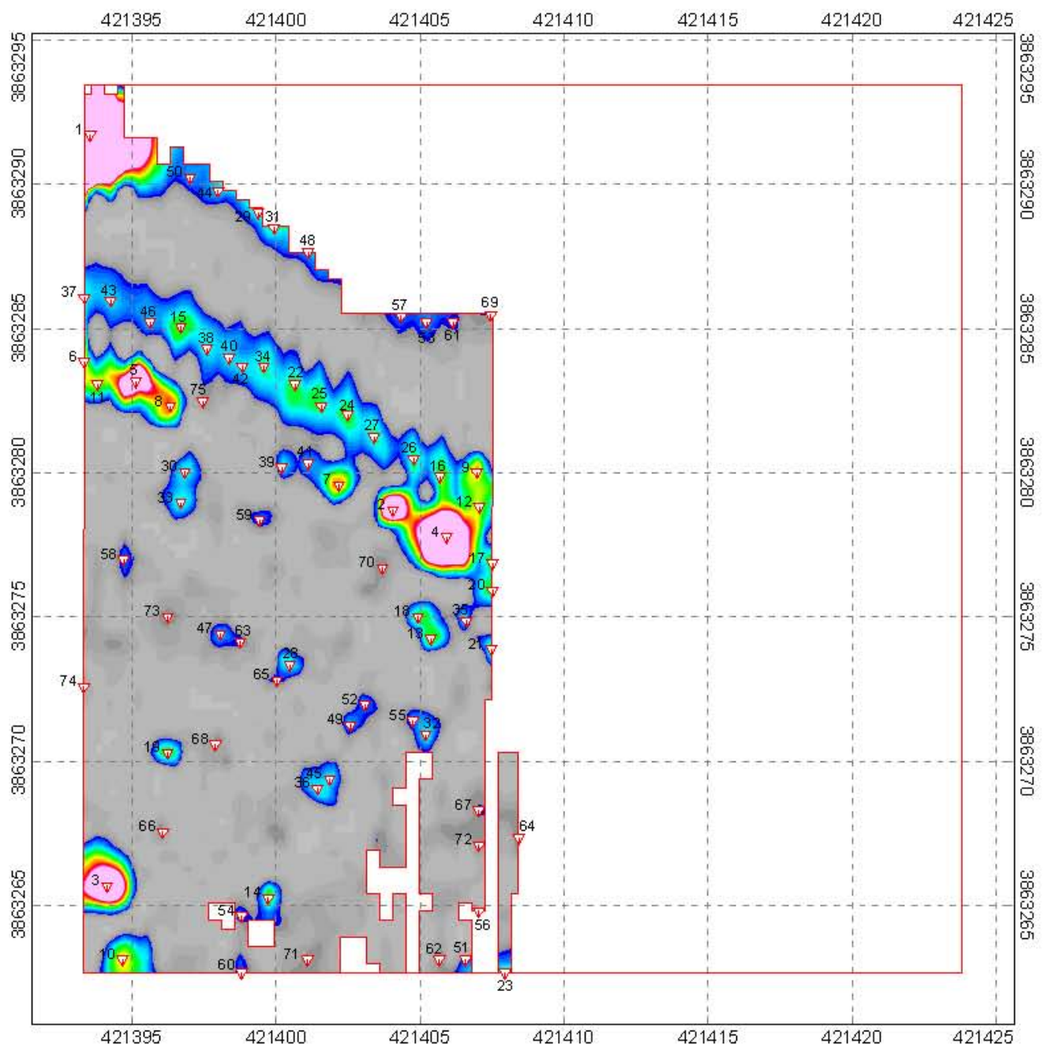
Scale 1:180

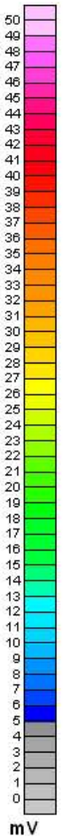
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid N-18
Camp Croft, South Carolina

Date of Survey: December 1, 2004



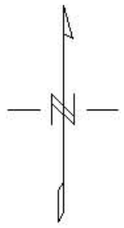


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid N-18
Camp Croft, South Carolina

Date(s) of Survey: December 1, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: N21
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	Chi^2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs)	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
N-21_1	421514.2725	3863278.674	96.9435	52.657	785.0		N-21_C1	12/01/04	400		18	0	01/09/05	CD	3	60	Wire fence	0	-6			0	0		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_103	421510.6319	3863273.142	85	34.5	3.0			12/01/04			0	0		CD	.25	8 x .25 x .25	stake, Rusted	0	0	NA	0	1	1	N21_103 - #008	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_112	421512.6123	3863272.782	91.5	33.32	3.0			12/01/04			0	0		NC			3mV Ch1 - Edge of N21_49								1/26/06	ddm	YES	TF	01/26/06	NA	DRA	02/22/06
N-21_14	421509.4176	3863289.749	81	89	74.0			12/01/04	51		6	12	01/09/05	CD	2	2 x 6	Hinge and wire	0	-24			1	1		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_21	421510.636	3863288.073	85	83.5	39.0		N-21_C41	12/01/04	55		6	0	01/09/05	CD	2	2 x 6	Hinge	18	0			2	4		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_23	421504.07	3863282.537	63.4556	65.3257	39.0			12/01/04	60		0	0	01/09/05	CD	2	120	Wire/rock	0	10			0	2		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_24	421510.7892	3863291.577	85.5	95	40.0			12/01/04			0	0		CD	.25	24 x .25 x .25	wire, Rusted	0	0	NA	0	3	3	N21_24 - #009	1/26/06	rly	YES	TF	01/26/06	YES	RVW	01/25/06
N-21_25	421511.395	3863278.17	87.5	51	38.0			12/01/04			0	0		CD	.25	24 x .25 x .25	barb wire, Rusted	0	0	NA	0	3	3	N21_25 - #007	1/26/06	rly	YES	TF	01/26/06	YES	RVW	01/25/06
N-21_26	421513.2014	3863262.729	93.442	0.3261	31.0		N-21_C42	12/01/04	148		0	0	01/09/05	CD	1	20	Wire					2	8		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_28	421513.9742	3863265.608	95.976	9.7772	28.0			12/01/04			0	0		NC			below depth of detection - dug to 36", item still present, probable utility								1/26/06	rly	NA	DRA	02/22/06	NA	DRA	02/22/06
N-21_29	421507.1298	3863279.847	73.5	56.5	27.0			12/01/04			0	0		CD	.25	40 x .25 x .25	wire, Rusted	0	0	NA	0	3	3	N21_29 - #014	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_3	421514.169	3863282.783	96.6001	66.1415	243.0		N-21_C2	12/01/04	102		6	18	01/09/05	CD	2	25	Wire					0	0		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_30	421513.2224	3863275.122	93.5	41	24.0			12/01/04			0	0		CD	.25	4 x .25 x .25	nails [3], Rusted	0	0	NA	0	3	3	N21_30 - #003	1/26/06	rly	YES	TF	01/26/06	YES	RVW	01/25/06
N-21_32	421507.1285	3863275.276	73.5	41.5	23.0			12/01/04			0	0		CD	.25	6 x 3 x .25	hinge, Rusted	0	0	NA	0	3	3	N21_32 - #023	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_35	421505.4472	3863282.161	67.9759	64.0929	19.0			12/01/04			0	0		CD	.25	3 x .25 x .25	3ea. nails, Rusted	0	0	NA	0	3	3	N21_35 - #041	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_36	421511.6237	3863280.26	88.2485	57.8605	16.0		N-21_C26	12/01/04	25		0	0	01/09/05	CD	1	20	Wire					1	1		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_37	421504.8447	3863280.152	66	57.5	15.0			12/01/04			0	0		NC			checked with fisher and Schonstedt								1/26/06	rly	YES	TF	01/26/06	NA	DRA	02/22/06
N-21_38	421503.9304	3863279.543	63	55.5	16.0			12/01/04	30		6	0	01/09/05	NC			checked with fisher and Schonstedt								1/26/06	rly	YES	TF	01/26/06	NA	DRA	02/22/06
N-21_38	421503.9304	3863279.543	63	55.5	16.1			12/01/04			0	0		CD	1	8	Spike	2	0			2	6		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_40	421507.1303	3863281.98	73.5	63.5	13.0			12/01/04			0	0		CD	.5	36 x .25 x .25	wire and nails, Rusted	0	0	NA	0	5	5	N21_40 - #047	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_41	421507.1306	3863282.894	73.5	66.5	13.0			12/01/04			0	0		CD	.25	10 x .25 x .25	nail and wire, Rusted	0	0	NA	0	2	2	N21_41 - #045	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_45	421510.8021	3863264.649	85.566	6.6268	14.0		N-21_C36	12/01/04	24		0	6	01/09/05	GEO	10	5 x 5	Rocks	1	0			4	8		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_46	421506.6738	3863283.656	72	69	11.0			12/01/04			0	0		CD	.25	6 x .25 x .25	Large. nail, Rusted	0	0	NA	0	2	2	N21_46 - #044	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_47	421514.9016	3863287.956	99	83.12	11.0			12/01/04	12		0	0	01/09/05	CD	1	15	Wire	0	4			0	2		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_49	421513.9836	3863273.142	96	34.5	12.0			12/01/04	15		0	-12	01/09/05	CD	0.1	2	Nail	0	-6			2	3		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_5	421509.7177	3863272.686	82	33	152.0		N-21_C6	12/01/04	160		18	6	01/09/05	CD	1	10	Survey spike					1	5		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_51	421501.1528	3863292.093	53.873	96.6854	11.0		N-21_C40	12/01/04	17		-6	-12	01/09/05	GEO	5	6 x 6	Rock					0	4		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_52	421510.0259	3863285.483	83	75	10.0			12/01/04	14		12	0	01/09/05	GEO	2	4 x 4	Rock	0	2			1	4		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_53	421507.2845	3863288.683	74	85.5	10.0			12/01/04			0	0		CD	.25	6 x .25 x .25	2ea. nails, Rusted	0	0	NA	0	1	1	N21_53 - #035	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_54	421512.9163	3863269.942	92.5	24	12.0			12/01/04	6		0	0	01/09/05	GEO	5	4 x 4	Rock					1	3		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_57	421511.4743	3863271.475	87.766	29.0284	10.0			12/01/04	11		0	0	01/09/05	GEO	5	5 x 5	Rock					2	4		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_59	421506.6749	3863287.921	72	83	9.0			12/01/04			0	0		CD	.25	6 x .25 x .25	nails and wire, Rusted	0	0	NA	0	3	3	N21_59 - #038	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_6	421509.5788	3863281.241	81.5366	61.0794	119.0		N-21_C7	12/01/04			0	0		CD	5		Wire and nails					0	3		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_60	421514.5015	3863276.629	97.6969	45.9451	9.0			12/01/04	5		0	12	01/09/05	CD		60	Wire fence, Shared with #1								01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_61	421502.9458	3863290.441	59.7588	91.2671	8.0			12/01/04	15		12	0	01/09/05	GEO	3	4 x 4	Rock					1	3		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_62	421507.3891	3863286.376	74.3453	77.9277	7.0			12/01/04	14		-6	12	01/09/05	CD	1	20	Wire					1	2		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_7	421512.1558	3863274.513	90	39	99.0		N-21_C5	12/01/04	67		0	6	01/09/05	CD	1	28	Wire	0	2			0	4		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_74	421507.533	3863278.153	74.8247	50.9431	6.0			12/01/04			0	0		CD	.25	8 x .25 x .25	wire, Rusted	0	0	NA	0	3	3	N21_74 - #010	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_77	421508.5005	3863278.323	78	51.5	5.0			12/01/04			0	0		NC			checked with fisher and Schonstedt								1/26/06	rly	YES	TF	01/26/06	NA	DRA	02/22/06
N-21_8	421512.7631	3863266.743	92	13.5	87.0		N-21_C21	12/01/04	115		12	-6	01/09/05	CD	1	15	Wire	12	0			1	3		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

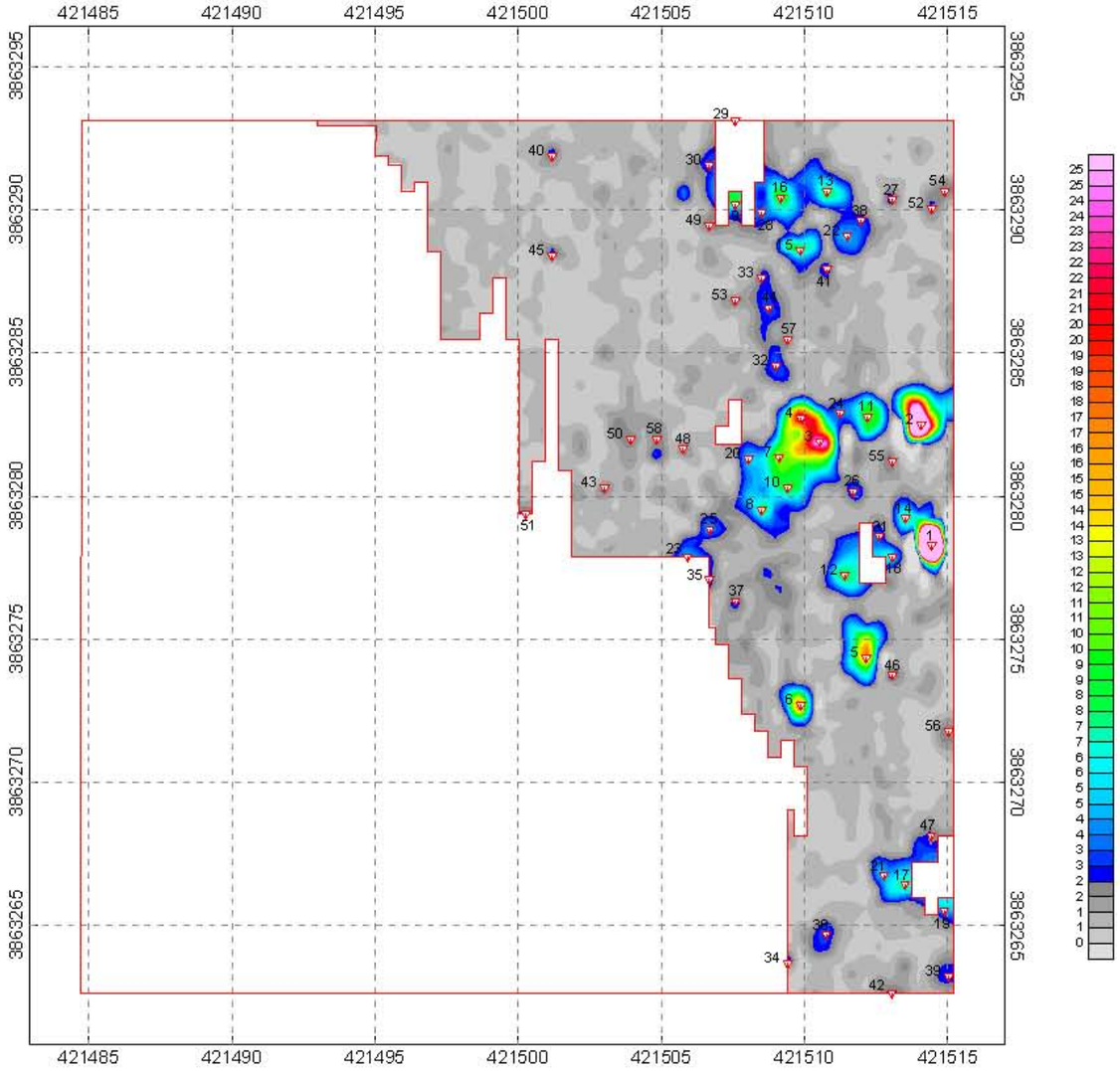
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: N21
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
N-21_91	421503.0176	3863284.266	60	71	3.0			12/01/04	3		0	0	01/09/05	GEO	3	3 x 3	Rock	-2	0			0	2		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_93	421504.3906	3863291.426	64.5	94.5	4.0			12/01/04	3		12	-6	01/09/05	GEO	2	2 x 2	Rock	0	6			0	1		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-21_C10	421509.4151	3863280.303	81	58		9		12/01/04			0	0		CD	3	3 x .25 x .25	multiple nails and pieces of wire, Rusted	0	0	NA	0	3	3	N21_C10 - #051	1/26/06	bam	NA	DRA	02/22/06	YES	RVW	
N-21_C11	421512.2029	3863282.771	90.1473	66.101		9	N-21_19	12/01/04			0	0		CD	.5	36 x .25 x .25	barb wire, Rusted	0	0	NA	0	2	2	N21_C11 - #026	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C12	421511.3948	3863277.256	87.5	48		9	N-21_11	12/01/04			0	0		CD	.25	8 x .25 x .25	wire, Rusted	0	0	NA	0	4	4	N21_C12 - #025	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C13	421510.789	3863290.663	85.5	92		8	N-21_13	12/01/04			0	0		CD	.25	24 x .25 x .25	nails/wire/hasp, Rusted	0	0	NA	0	2	2	N21_C13 - #011	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C14	421513.5282	3863279.236	94.5	54.5		8		12/01/04			0	0		CD	.5	24 x .5 x .	spring, Rusted	0	0	NA	0	2	2	N21_C14 - #020	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C15	421509.8449	3863288.578	82.4032	85.1592		8	N-21_10	12/01/04			0	0		CD	.25	36 x .25 x .25	nails and wire, Rusted	0	0	NA	0	4	4	N21_C15 - #034	01/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C16	421509.1784	3863290.398	80.2142	91.1298		8	N-21_15	12/01/04			0	0		CD	.25	12 x .25 x .25	wire and nails, Rusted	0	0	NA	0	2	2	N21_C16 - #006	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C17	421513.5247	3863266.438	94.5	12.5		8		12/01/04			0	0		CD	.25	7 x .25 x .25	wire, Rusted	0	0	SE	30	4	4	N21_C17 - #048	1/26/06	bam	YES	TF	01/26/06	YES	RVW	01/25/06
N-21_C18	421513.0708	3863277.865	93	50		7	N-21_33	12/01/04			0	0		CD	.25	15 x .25 x .25	wire, Rusted	0	0	NA	0	2	2	N21_C18 - #018	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C19	421514.8956	3863265.524	99	9.5		6	N-22_2	12/01/04			0	0		CD	.25	8 x .25 x .25	wire/nails, Rusted	0	0	NA	0	2	2	N21_C19 - #048/N21-C19a - #021	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C20	421508.0442	3863281.303	76.5	61.28		5	N-21_27	12/01/04			0	0		CD	.25	3 x .25 x .25	3ea. nails, Rusted	0	0	NA	0	3	3	N21_C20 - #037	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C22	421511.4876	3863289.09	87.7943	86.8381		4		12/01/04			0	0		CD	.25	3 x .25 x .25	nail, Rusted	0	0	NA	0	3	3	N21_C22 - #031	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C23	421505.9105	3863277.866	69.5	50		4	N-21_22	12/01/04			0	0		CD	.25	12 x .25 x .25	wire, Rusted	0	0	NA	0	4	4	1a ph013	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C24	421511.2439	3863282.893	87	66.5		4		12/01/04			0	0		CD	.25	36 x .25 x .25	wire, Rusted	0	0	NA	0	3	3	N21_C24 - #027	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C25	421506.7034	3863278.853	72.1015	53.2394		4	N-21_34	12/01/04			0	0		CD	.25	6 x .25 x .25	wire, Rusted	0	0	NA	0	3	3	N21_C25 - #012	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C27	421513.0741	3863290.357	93	91		4		12/01/04			0	0		CD	.25	8 x .25 x .25	wire, Rusted	0	0	NA	0	2	2	N21_C27 - #015	1/26/06	rly	YES	TF	01/26/06	YES	RVW	01/25/06
N-21_C28	421508.5036	3863289.901	78	89.5		3		12/01/04			0	0		CD	.5	10 x .5 x .5	steel bar, Rusted	0	0	NA	0	2	2	N21_C28 - #005	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C3	421510.5394	3863281.887	84.6884	63.199		25	N-21_2	12/01/04			0	0		CD	.25	24 x .25 x .25	2 nails and wire, Rusted	0	0	NA	0	3	3	N21_C3 - #033	1/26/06	rly	YES	TF	01/26/06	YES	RVW	01/25/06
N-21_C30	421506.6759	3863291.578	72	95		3	N-21_43	12/01/04			0	0		CD	.25	.5 x .25 x .25	spring, Rusted	0	0	NA	0	4	4	N21_C30 - #041	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C31	421512.6139	3863278.626	91.5	52.5		3	N-21_18	12/01/04			0	0		CD	.25	11 x .25 x .25	wire, Rusted	0	0	NA	0	1	1	N21_C31 - #019	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C33	421508.503	3863287.616	78	82		3	N-21_39	12/01/04			0	0		CD	.25	6 x .25 x .25	nail and wire, Rusted	0	0	NA	0	4	4	N21_C33 - #043	1/26/06	rly	YES	TF	01/26/06	YES	RVW	01/25/06
N-21_C35	421506.672	3863277.105	72	47.5		3	N-21_16	12/01/04			0	0		CD	.25	.8 x .5 x .5	steel, Rusted	0	0	NA	0	3	3	N21_C35 - #022	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C37	421507.5859	3863276.343	75	45		3		12/01/04			0	0		CD	.25	3 x .5 x .5	steel/nail, Rusted	0	0	NA	0	2	2	N21_C37 - #024	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C38	421511.9803	3863289.65	89.4107	88.6774		3		12/01/04			0	0		CD	.,25	12 x .25 x .25	wire, Rusted	0	0	NA	0	2	2	N21_C38 - #030	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C39	421515.0473	3863263.238	99.5	2		3	N-21_31	12/01/04			0	0		CD	.25	5 x .25 x .25	nails , revisit 4 inch wire, Rusted	0	0	NA	0	3	3	N21_C39 - #049/N21_C39a - #046	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C4	421509.8728	3863282.741	82.5	66		23	N-21_4	12/01/04			0	0		MD	1	5 x 2.75 x 2.75	Also found barbed wire, Rusted	0	0	N/A	0	4	6	N21_C4 - #028	01/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C46	421513.0696	3863273.751	93	36.5		2		12/01/04			0	0		CD	.25	10 x .25 x .25	wire, Rusted	0	0	NA	0	3	3	N21_C46 - #002	1/26/06	rly	YES	TF	01/26/06	YES	RVW	01/25/06
N-21_C47	421514.4392	3863268.114	97.5	18		2	N-21_17	12/01/04			0	0		CD	.25	15 x .25 x .25	wire, Rusted	0	0	NA	0	1	1	N21_C47 - #047	1/24/06	rly	YES	TF	01/25/06	YES	RVW	01/25/06
N-21_C48	421505.7591	3863281.675	69	62.5		2		12/01/04			0	0		CD	.25	3 x .25 x .25	2ea. nails, Rusted	0	0	NA	0	3	3	N21_C48 - #039	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C49	421506.6753	3863289.445	72	88		2		12/01/04			0	0		CD	.25	9 x .25 x .25	wire, Rusted	0	0	NA	0	3	3	N21_C49 - #032	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C50	421503.9311	3863281.98	63	63.5		2		12/01/04			0	0		CD	.25	6 x .25 x .25	4ea. nails, Rusted	0	0	NA	0	3	3	N21_C50 - #046	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C52	421514.4451	3863290.052	97.5	90		2		12/01/04			0	0		CD	.25	15 x .25 x .25	wire, Rusted	0	0	NA	0	2	2	N21_C52 - #017	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C53	421507.5887	3863286.855	75	79.5		2		12/01/04			0	0		CD	.25	6 x .25 x .25	nail and wire, Rusted	0	0	NA	0	3	3	N21_C53 - #040	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C55	421513.0717	3863281.216	93	61		2		12/01/04			0	0		CD	.25	12 x 0.5 x 0.5	coiled spring, Rusted	0	0	NA	0	4	4		1/26/06	bam	NA	DRA	02/22/06	YES	RVW	
N-21_C57	421509.4165	3863285.483	81	75		2		12/01/04			0	0		CD	.25	9 x .25 x .25	nail and wire, Rusted	0	0	NA	0	3	3	N21_C57 - #036	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C58	421504.8451	3863281.98	66	63.5		2		12/01/04			0	0		CD	.25	6 x .25 x .25	2ea. nails s, Rusted	0	0	NA	0	4	4	N21_C58 - #042	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C8	421508.5008	3863279.542	78	55.5		10	N-21_9	12/01/04			0	0		CD	.5	10 x 2 x .25	hinge, Rusted	0	0	NA	0	4	4	N21_C8 - #016	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-21_C9	421507.5896	3863290.206	75	90.5		10	N-21_12	12/01/04			0	0		CD	.25	6 x 4 x .25	hinge, Rusted	0	0	NA	0	2	2	N21_C9 - #004	1/26/06	rly	NA	DRA	02/22/06	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)



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)

Scale 1:180

2.5 0 2.5 5 7.5 10

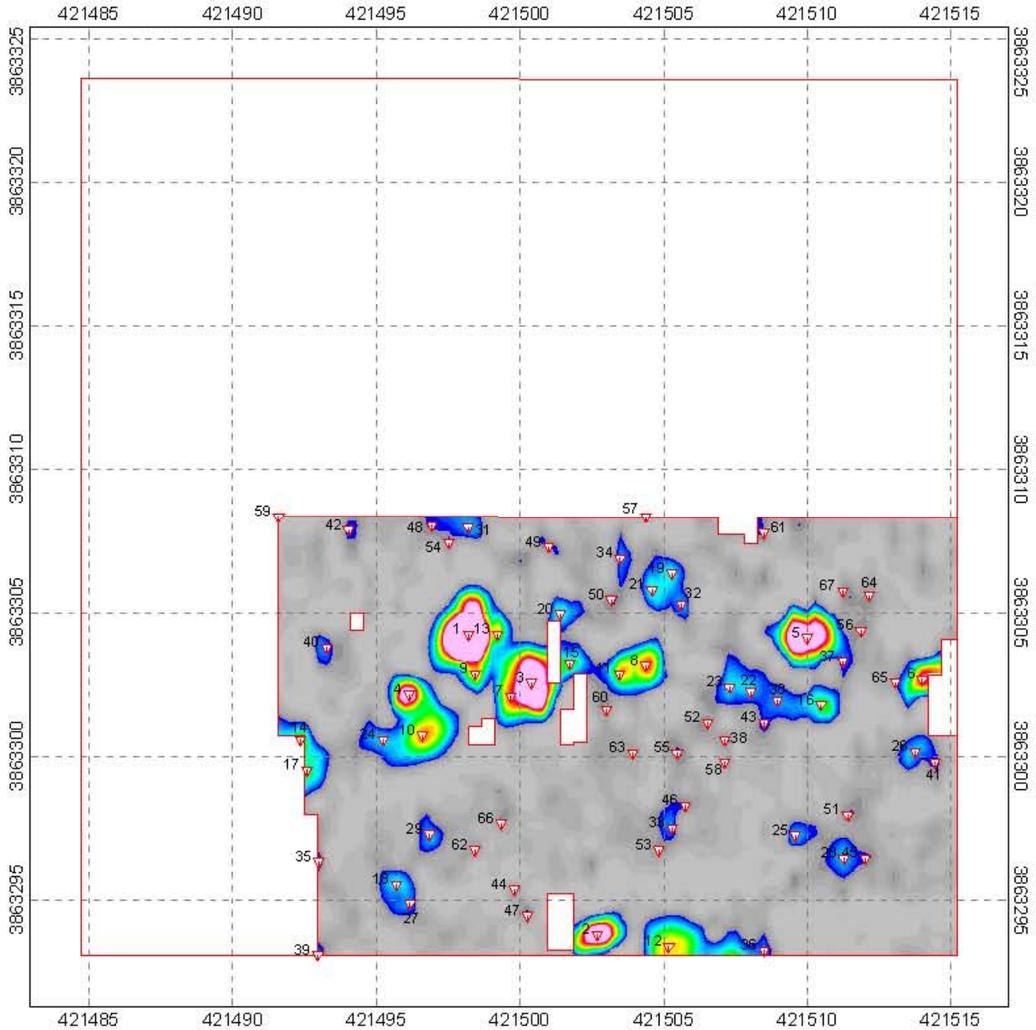
metres

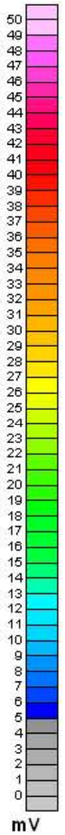
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid N-21
Camp Croft, South Carolina

Date of Survey: December 1, 2004





NAEVA GEOPHYSICS INC.
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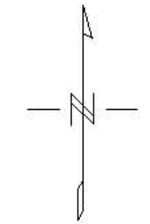


Scale 1:180

2.5 0 2.5 5 7.5 10

metres

NAD83 / UTM zone 17N

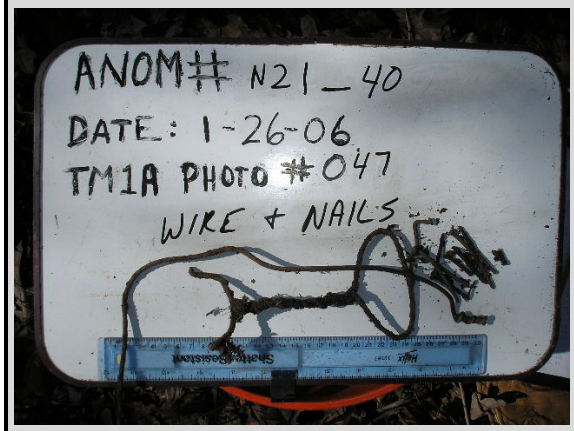
Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid P-21
Camp Croft, South Carolina

Date(s) of Survey: December 1, 2004

GRID N21 DIG PHOTOS

GRID N21 DIG PHOTOS (CONTINUED)



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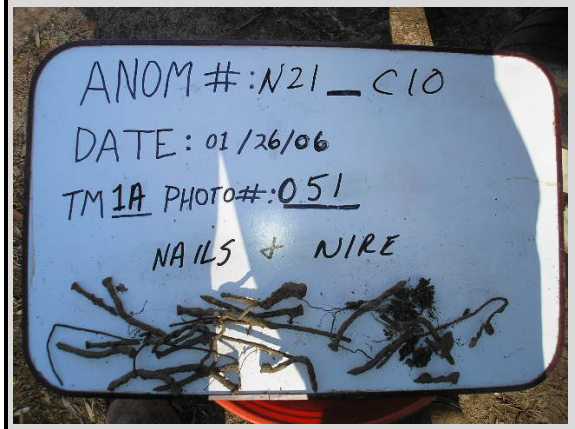

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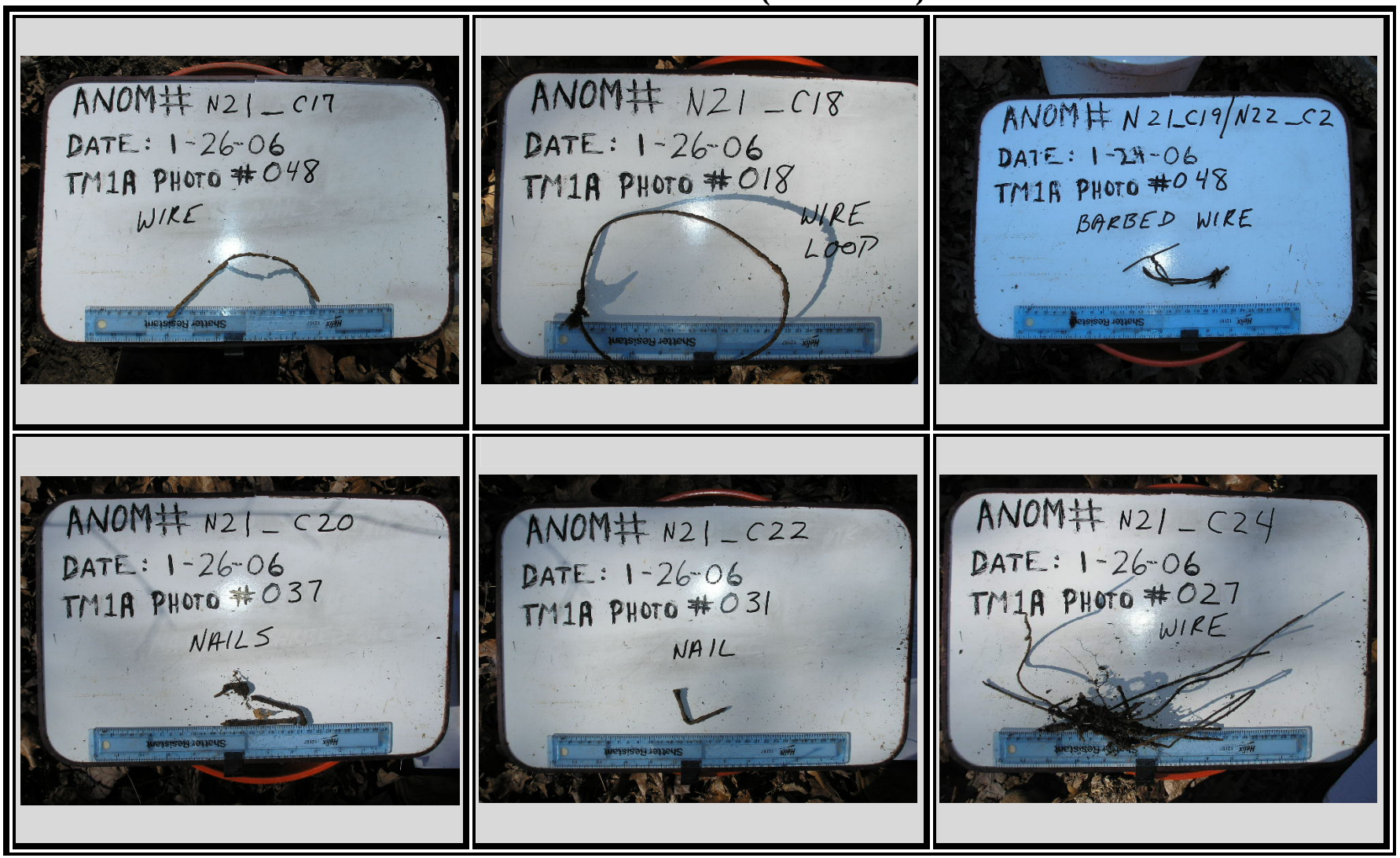
GRID N21 DIG PHOTOS (CONTINUED)



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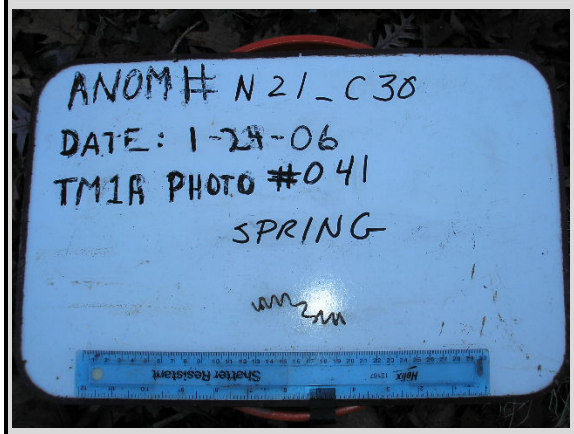

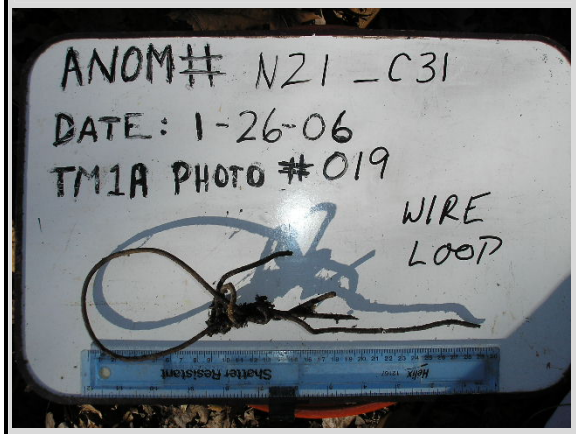

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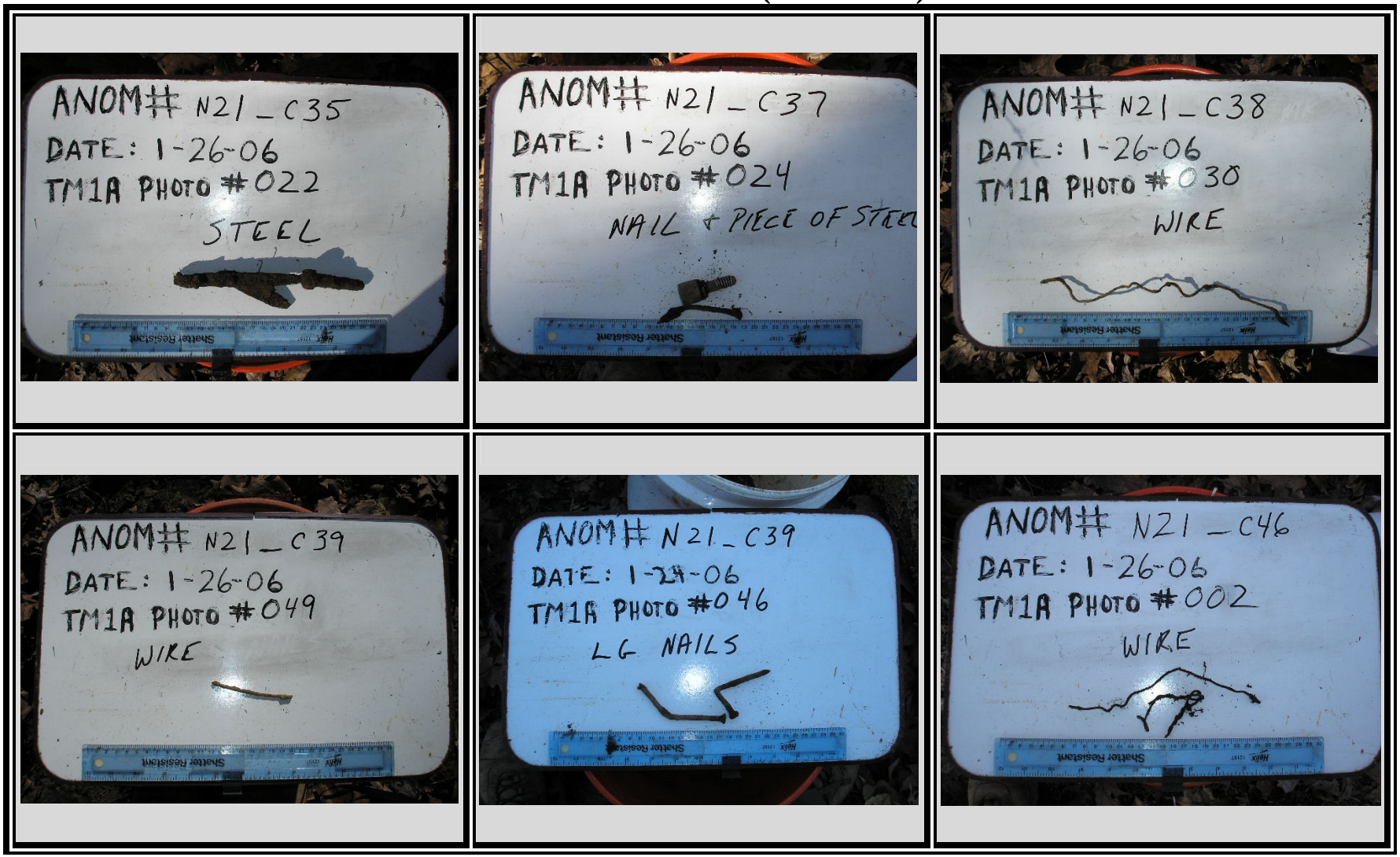

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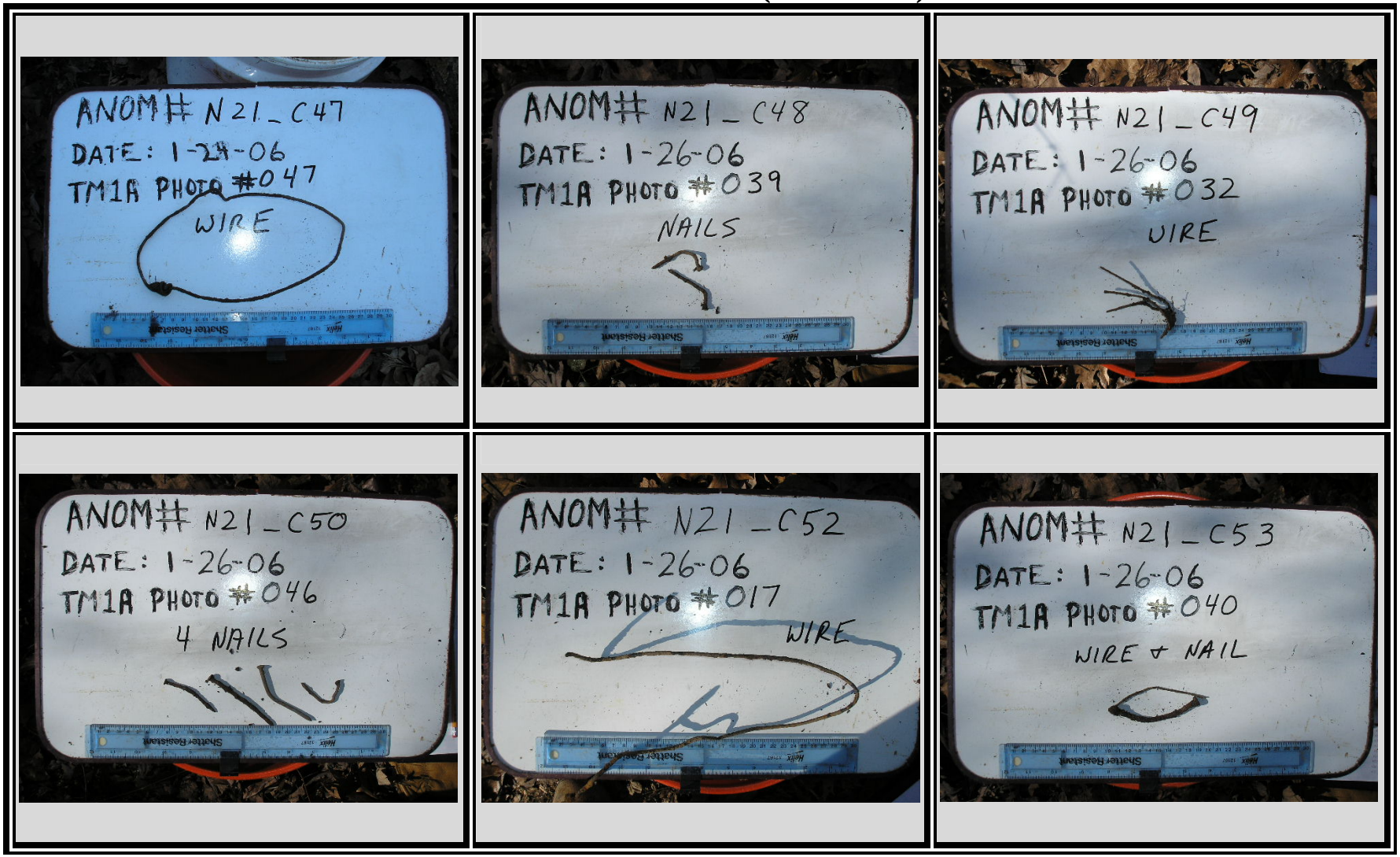


GRID N21 DIG PHOTOS (CONTINUED)

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: N22
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
N-22_10	421524.3485	3863292.335	30	97.5	43.0		N-22_C8	11/30/04	3		-12	0	01/09/05	NC											01/11/05	HEL	Yes	HEL	01/2005	NA	DRA	02/21/06
N-22_100	421540.3377	3863264.45	82.5	6	3.0			11/30/04			0	0	01/09/05	CD	0.1	2	Nail	8	0			2	4		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_102	421515.9661	3863280.606	2.5	59	3.0			11/30/04	5		0	0	01/09/05	GEO	2	3 x 3	Rock	20	0			0	2		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_105	421516.4221	3863276.569	4	45.75	2.0			11/30/04	103		6	6	01/09/05	GEO	15	10 x 10	Rocks					0	10		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_106	421528.915	3863277.513	45	48.86	3.0			11/30/04	3		-9	0	01/09/05	GEO	2	3 x 3	Rock	2	0			0	3		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_108	421527.9992	3863271.005	42	27.5	3.0			11/30/04	4		0	0	01/09/05	GEO	2	3 x 3	Rock					0	3		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_12	421518.0947	3863264.761	9.5	7	45.0		N-22_C7	11/30/04	85		6	-6	01/09/05	CD	1		Nails / Rock	-2	0			6	6		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_15	421523.4264	3863262.627	27	0	30.0			11/30/04			0	0		CD	.5	28 x .25 x .25	barbed wire, Rusted	0	0	NE	15	4	5	N22_15 - #026	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
N-22_16	421523.4265	3863263.084	27	1.5	31.0		N-22_C14	11/30/04	25		6	-24	01/09/05	CD	0.5	60	Wire					3	3		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_18	421515.2009	3863267.961	0	17.5	21.0			11/30/04			0	0		CD	.25	8 x .25 x .25	nail, Rusted	0	0	NA	0	6	6	N22_18 - #051	1/24/06	rly	YES	TF	01/25/06	YES	RVW	01/25/06
N-22_19	421520.2343	3863289.441	16.5	88	24.0		N-22_C26	11/30/04	29		18	0	01/09/05	CD	1	4	Nail	18	0			2	4		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_21	421520.6855	3863267.807	18	17	21.0			11/30/04	26		0	0	01/09/05	CD	1	24	Wire	10	0			0	2		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_22	421516.1146	3863266.438	3	12.5	22.0			11/30/04			0	0		NC			nc within 36 NC.								1/24/06	rly	NA	DRA	02/22/06	NA	DRA	02/22/06
N-22_24	421539.8839	3863276.258	81	44.75	32.0		N-22_C3	11/30/04	7		30	0	01/09/05	CD	0.1	4	Nail	0	-30			4	6		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_26	421524.3417	3863267.197	30	15	18.0		N-22_C33	11/30/04	28		18	0	01/09/05	CD	0.1	2	Nail					0	2		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_27	421517.9496	3863291.575	9	95	15.0			11/30/04	20		0	0	01/09/05	CD	0		Old fire pit debris					3	4		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_28	421521.453	3863289.289	20.5	87.5	14.0			11/30/04			0	0		CD	.25	4 x .25 x .25	nail, Rusted	0	0	NE	15	8	9	N22_28 - #032	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
N-22_29	421522.5164	3863277.71	24	49.5	16.0		N-22_C30	11/30/04	25		0	0	01/09/05	CD	0.1	2	Nail					0	2		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_3	421528.4569	3863273.595	43.5	36	116.0		N-22_C9	11/30/04	124		0	0	01/09/05	CD	2	24	Wire	3	0			0	6		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_30	421539.5777	3863270.697	80	26.5	19.0		N-22_C10	11/30/04	24		12	0	01/09/05	CD	0.5	12	Wire	12	0			0	0		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_31	421519.0112	3863273.597	12.5	36	13.0			11/30/04	18		6	-6	01/09/05	CD	1	1	Metal					3	4		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_32	421520.2283	3863267.39	16.5	15.63	11.0			11/30/04			0	0		CD	.25	8 x .25 x .25	wire, Rusted	0	0	NA	0	1	1	N22_32 - #045	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
N-22_33	421523.8869	3863275.576	28.5	42.5	12.0			11/30/04	19		0	0	01/09/05	GEO	5	4 x 4	Rock	12	0			3	4		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_34	421527.0904	3863290.963	39	93	10.0			11/30/04			0	0		CD	.25	6 x .25 x .25	large nail, Rusted	0	0	NA	90	0	3	N22_34 - #029	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
N-22_37	421524.6474	3863270.853	31	27	10.0		N-22_C40	11/30/04	18		0	0	01/09/05	CD	0.1	2	Nail					0			01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_4	421516.1144	3863265.523	3	9.5	76.0		N-22_C4	11/30/04	125		12	-6	01/09/05	CD	2	24	Wire					0	2		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_40	421519.7768	3863287.918	15	83	9.0			11/30/04			0	0		CD	.25	3 x .25 x .25	2ea nail in log, shared with n22-c24, Rusted	0	0	NA	60	-5	-4	N22_40 - #030	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
N-22_42	421515.2062	3863287.614	0	82	9.0			11/30/04			0	0		CD	.25	3 x .25 x .25	nails, Rusted	0	0	NA	0	1	1	N22_42 - #029	1/26/06	rly	YES	TF	01/26/06	YES	RVW	01/25/06
N-22_5	421518.4048	3863284.567	10.5	72	62.0		N-22_C23	11/30/04	108		0	0	01/09/05	CD	1.5	8	Bolt	0	5			2	4		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_56	421516.5765	3863284.278	4.5	71.05	5.0			11/30/04			0	0		NC			checked with 61								1/26/06	rly	NA	DRA	02/22/06	NA	DRA	02/22/06
N-22_6	421523.4334	3863288.679	27	85.5	64.0		N-22_C5	11/30/04			0	0	01/09/05	NC			No contact during reacqu or dig								01/11/05	HEL	Yes	HEL	01/2005	NA	DRA	02/21/06
N-22_60	421525.2552	3863264.912	33	7.5	4.0		N-22_C39	11/30/04	5		0	-6	01/09/05	GEO	5	5 x 5	Rocks	8	0			0	3		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_66	421521.1481	3863288.375	19.5	84.5	5.0			11/30/04			0	0		CD	.5	7 x 2 x .5	steel, Rusted	0	0	NA	0	18	20	N22_66 - #031	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
N-22_7	421524.8013	3863276.49	31.5	45.5	44.0		N-22_C15	11/30/04	69		0	0	01/09/05	CD	1	24	Wire					0	6		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_72	421528.0028	3863284.412	42	71.5	4.0			11/30/04	2.5		-6	-6	01/09/05	NC											01/11/05	HEL	Yes	HEL	01/2005	NA	DRA	02/21/06
N-22_8	421521.7587	3863293.097	21.5	100	48.0		N-22_C19	11/30/04	88		0	0	01/09/06	CD	1	2 x 4	Hinge	0	8			2	4		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_9	421522.0586	3863275.12	22.5	41	45.0		N-22_C11	11/30/04	83		0	0	01/09/05	GEO	0.5	2 x 2	Rock	0	2			2	3		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
N-22_C1	421517.9418	3863262.781	9	0.5		23	N-22_1	11/30/04			0	0		CD	.25	10 x .25 x .25	wire, Rusted	0	0	NA	0	3	3	N22_C1 - #043	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
N-22_C13	421522.9725	3863274.51	25.5	39		5	N-22_14	11/30/04			0	0		CD	.25	8 x .25 x .25	wire, Rusted	0	0	NE	0	3	3	N22_C13 - #028	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
N-22_C17	421515.6577	3863267.032	1.5	14.45		4	N-22_17	11/30/04			0	0		CD	.25	3 x .25 x .25	nail, Rusted	0	0	NA	0	2	2	N22_C17 - #050	1/24/06	rly	YES	TF	01/25/06	YES	RVW	01/25/06

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

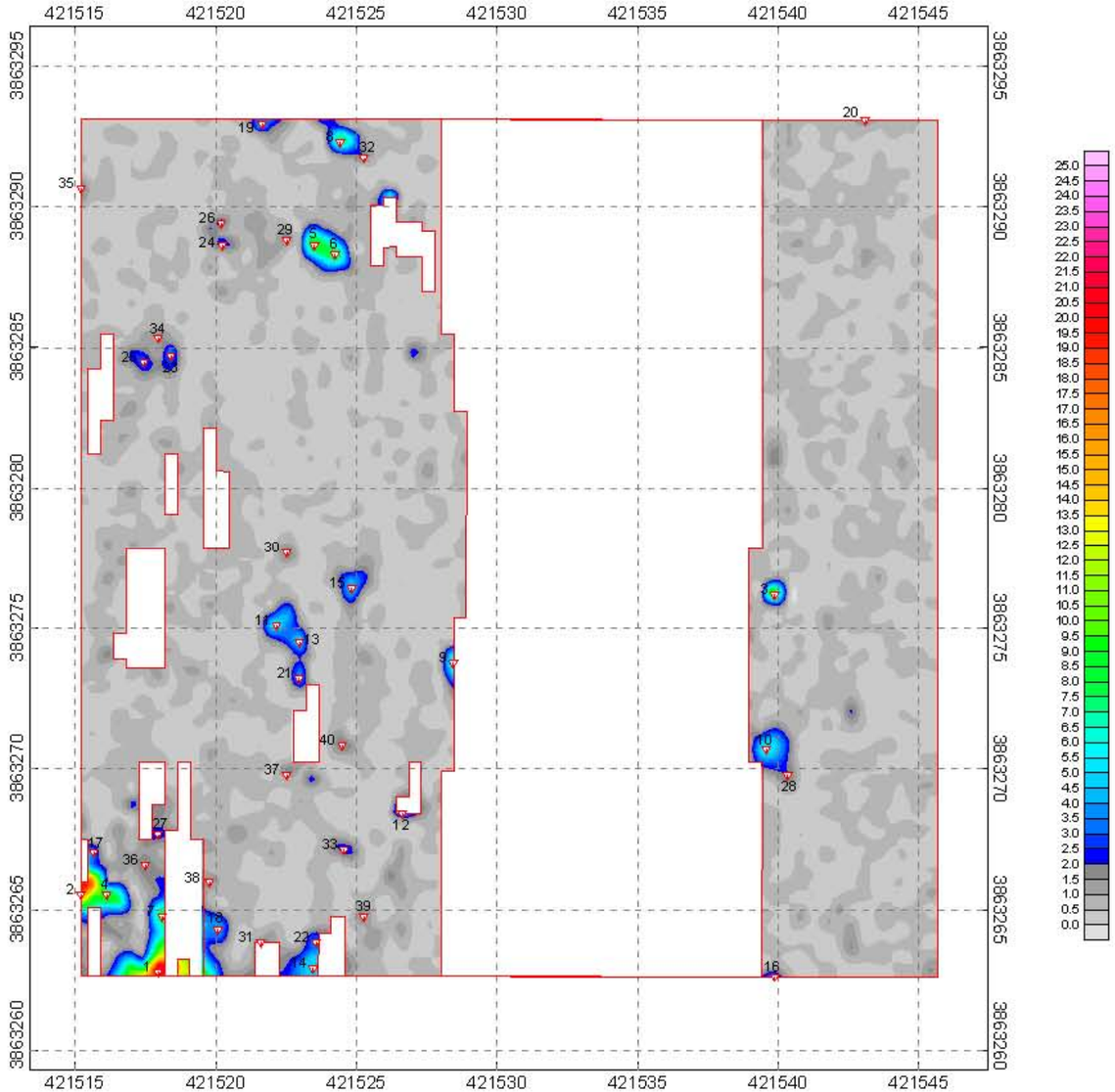
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: N22
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
N-22_C18	421520.0752	3863264.304	16	5.5		4	N-22_23	11/30/04			0	0		CD	.5	3.5 x .25 x .25	13 ea nails, Rusted	0	0	NA	0	5	5	N22_C18 - #025	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
N-22_C2	421515.2003	3863265.524	0	9.5		19	N-22_2	11/30/04			0	0		CD	.25	10 x .25 x .25	wires/nails, Rusted	0	0	NA	0	2	2	N22_C2 - #048/N22_C2a - #021	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-22_C22	421523.5791	3863263.846	27.5	4		3	N-22_25	11/30/04			0	0		CD	.25	20 x .25 x .25	wire, Rusted	0	0	E	0	2	2	N22_C22 - #027	1/23/06	barn	YES	TF	01/25/06	YES	RVW	01/25/06
N-22_C24	421520.2416	3863288.637	16.5249	85.3587		3	N-22_20	11/30/04			0	0		CD	.25	3 x .25 x .25	2ea nail in log, Rusted	0	0	NA	60	-5	-4	N22_C24 - #030	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
N-22_C25	421517.4521	3863284.458	7.3735	71.6444		3		11/30/04			0	0		NC			checked with 61								1/26/06	rly	YES	TF	01/26/06	NA	DRA	02/22/06
N-22_C27	421517.9432	3863267.656	9	16.5		3		11/30/04			0	0		NC			dug to 24in checked with em61,								1/26/06	rly	YES	TF	01/26/06	NA	DRA	02/22/06
N-22_C28	421540.3392	3863269.783	82.5	23.5		2	N-22_45	11/30/04			0	0		CD	.25	14 x .25 x .25	barbed wire, Rusted	0	0	NA	0	4	4	N22_C28 - #017	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
N-22_C31	421521.5985	3863263.846	21	4		2		11/30/04			0	0		CD	.5	24 x .25 x .25	1 nail and 24 in of wire, Rusted	0	0	NE	0	4	4	N22_C31 - #024	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
N-22_C32	421525.2624	3863291.725	33	95.5		2		11/30/04			0	0		CD	.25	3 x .25 x .25	Nails, Rusted	0	0	NA	0	2	3	N22_C32 - #052	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-22_C34	421517.9479	3863285.328	9	74.5		2	N-22_13	11/30/04			0	0		NC			checked with 61								1/26/06	rly	YES	TF	01/26/06	NA	DRA	02/22/06
N-22_C36	421517.4858	3863266.59	7.5	13		2		11/30/04			0	0		CD	.25	5 x .25 x .25	Nail, Rusted	0	0	NA	0	4	4	N22_C36 - 053	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
N-22_C37	421522.5142	3863269.788	24	23.5		2		11/30/04			0	0		NC			Rechecked still nc								1/26/06	rly	YES	TF	01/26/06	NA	DRA	02/22/06
N-22_C38	421519.7709	3863265.98	15	11		2		11/30/04			0	0		CD	.25	12 x .25 x .25	wire, Rusted	0	0	SW	15	4	4	1a ph050	1/26/06	barn	NA	DRA	02/22/06	YES	RVW	
N-22_C6	421524.2397	3863288.325	29.6465	84.3392		9	N-22_11	11/30/04			0	0		NC			24in hole nc								1/26/06	rly	NA	DRA	02/22/06	NA	DRA	02/22/06

* 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)

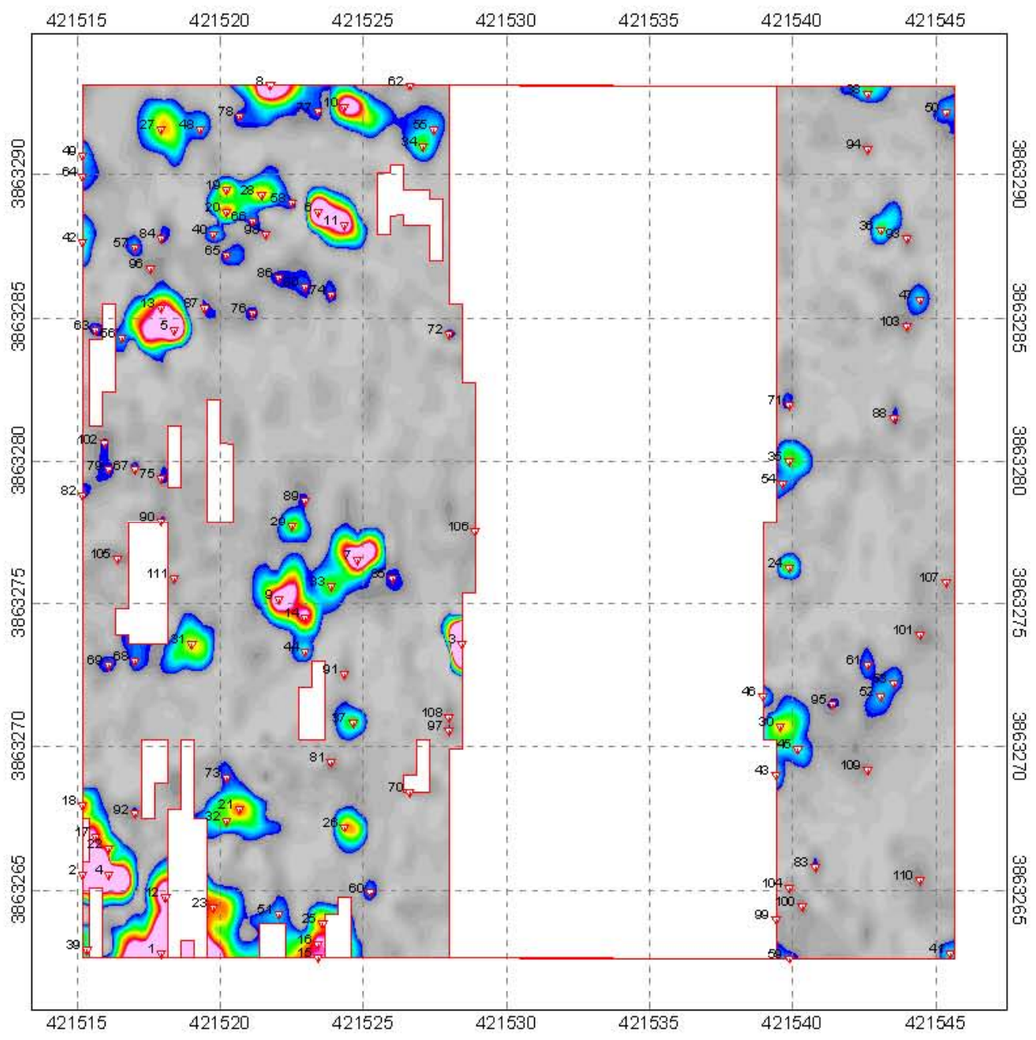
Scale 1:180

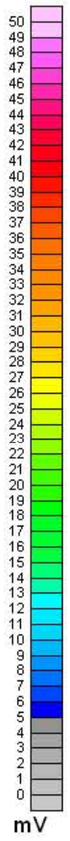
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid N-22
Camp Croft, South Carolina

Date of Survey: November 30, 2004



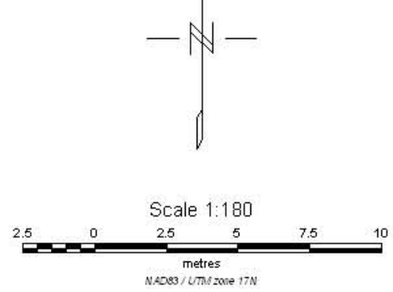


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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

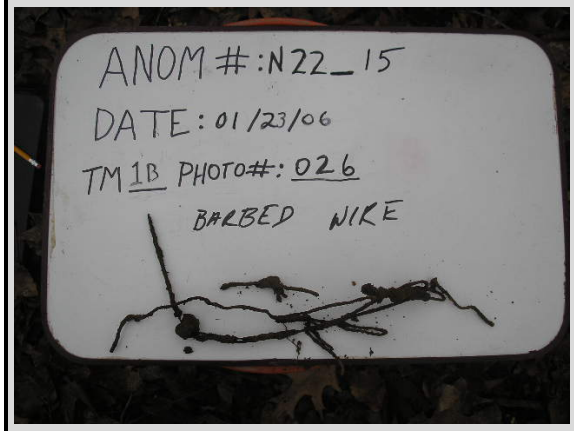


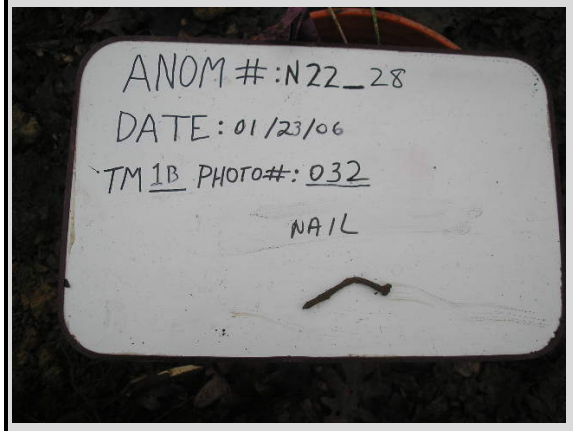
Zapata Engineering

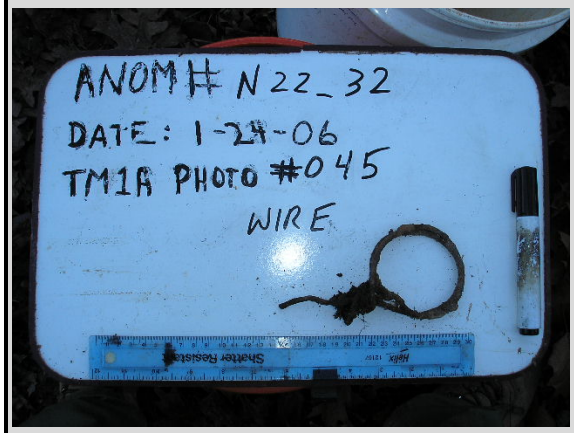
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid N-22
Camp Croft, South Carolina

Date of Survey: November 30, 2004

GRID N22 DIG PHOTOS

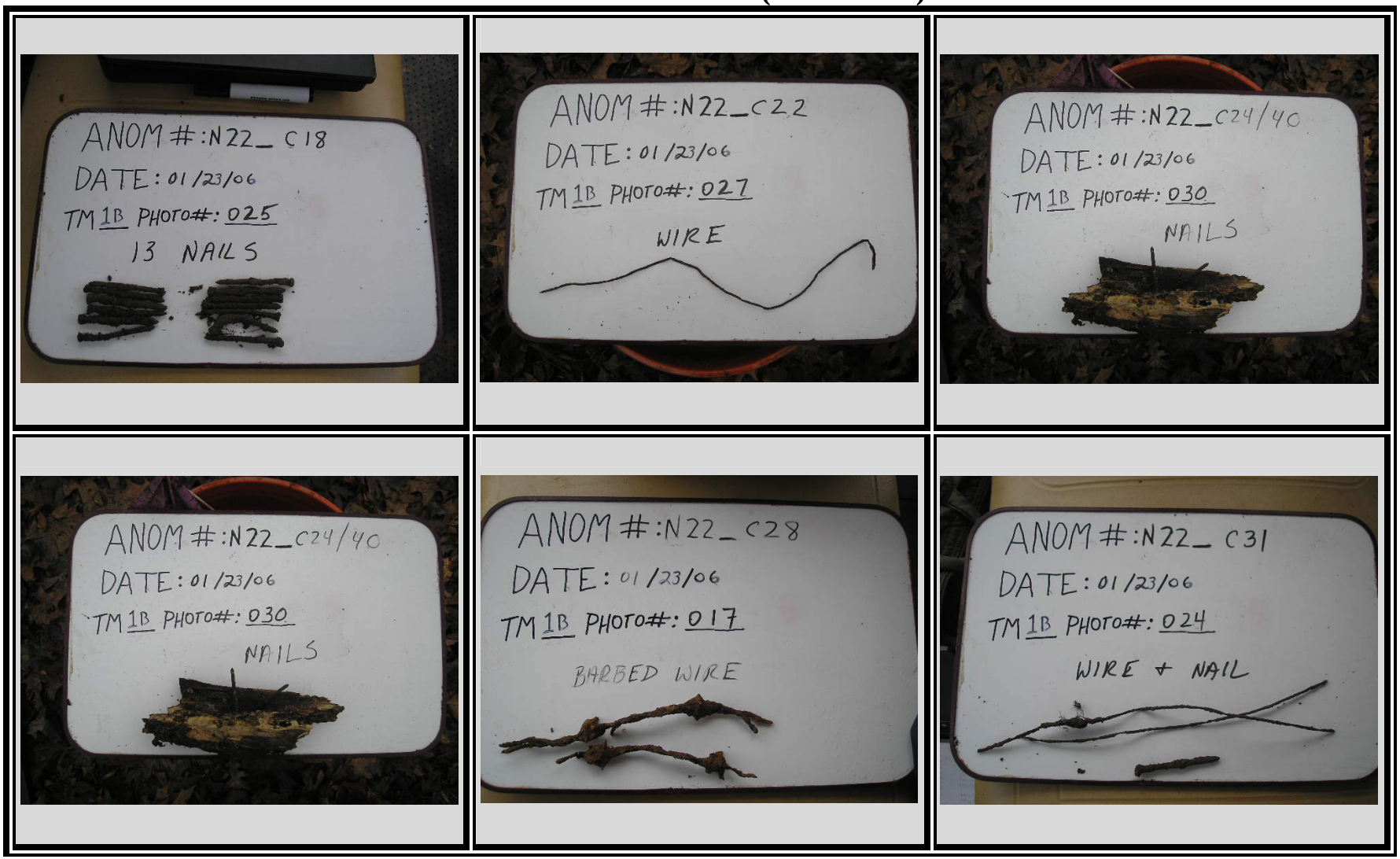






GRID N22 DIG PHOTOS (CONTINUED)

GRID N22 DIG PHOTOS (CONTINUED)



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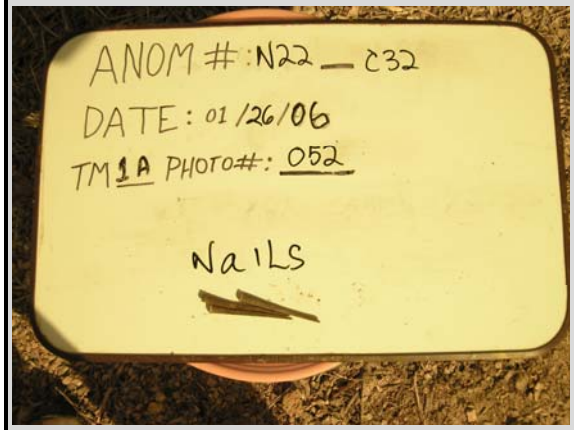


ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

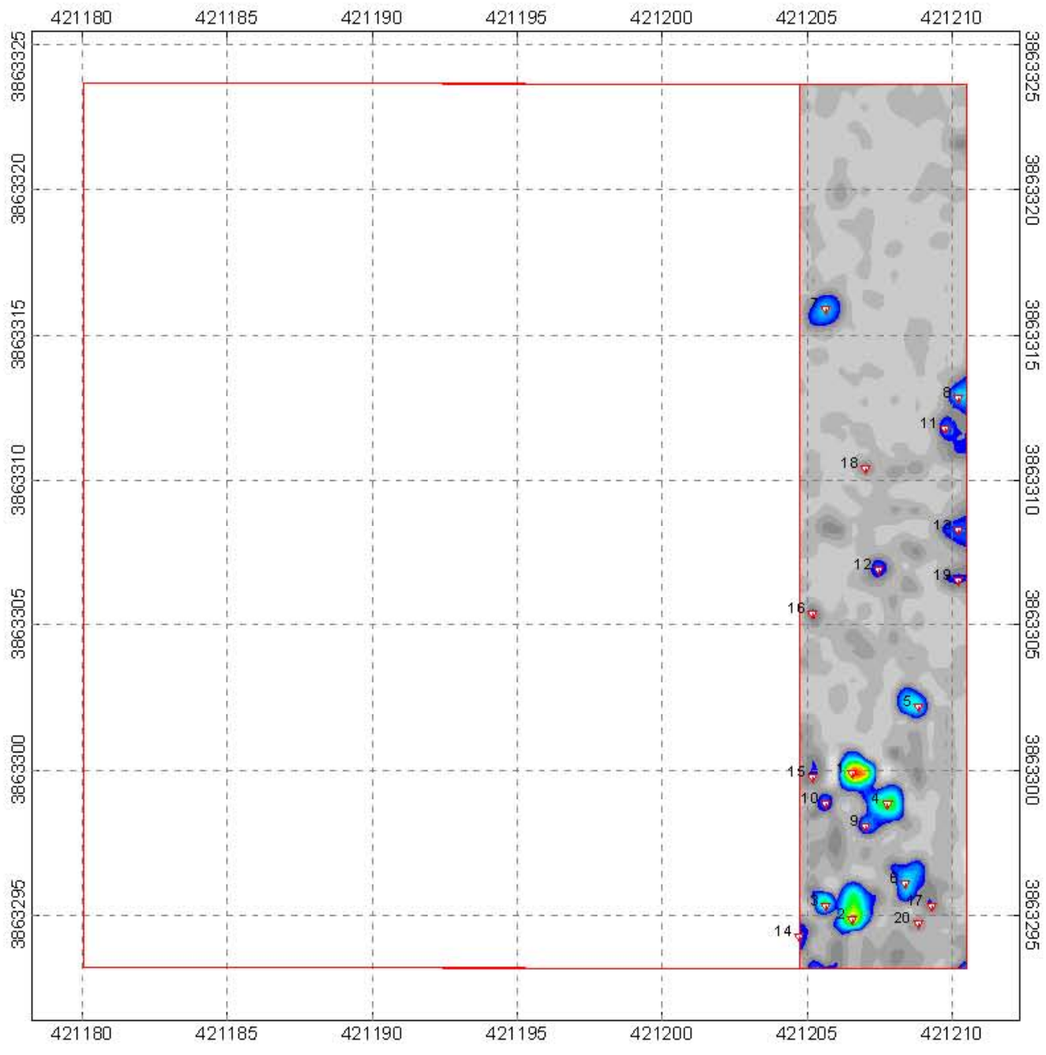
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: P11
Field Book ID:

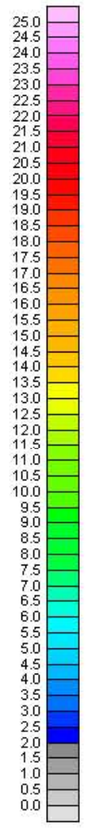
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
P-11_12	421209.7573	3863308.416	97.5	50	32.0		P-11_C13	11/28/04			0	0		CD	0.5	0.75 x 5	Bolt - flag not in					1	1		01/18/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005
P-11_14	421208.6892	3863302.322	94	30	34.0		P-11_C5	11/28/04	35		6	-18	01/10/05	CD		1.5 x 2	Aluminum and steel					0	0		01/18/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005
P-11_25	421207.6267	3863316.795	90.5	77.5	13.0			11/28/04	13		0	-6	01/10/05	CD	0.25	0.375 x 1.5	Bolt					2	2		01/18/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005
P-11_3	421210.2152	3863311.654	99	60.63	75.0		P-11_C11 / P-12_(	11/28/04	115		6	-6	01/10/05	CD	0.25	1 x 8 x 0.125	Metal nail					2	2		01/18/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005

* 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)

Scale 1:180

2.5 0 2.5 5 7.5 10

metres

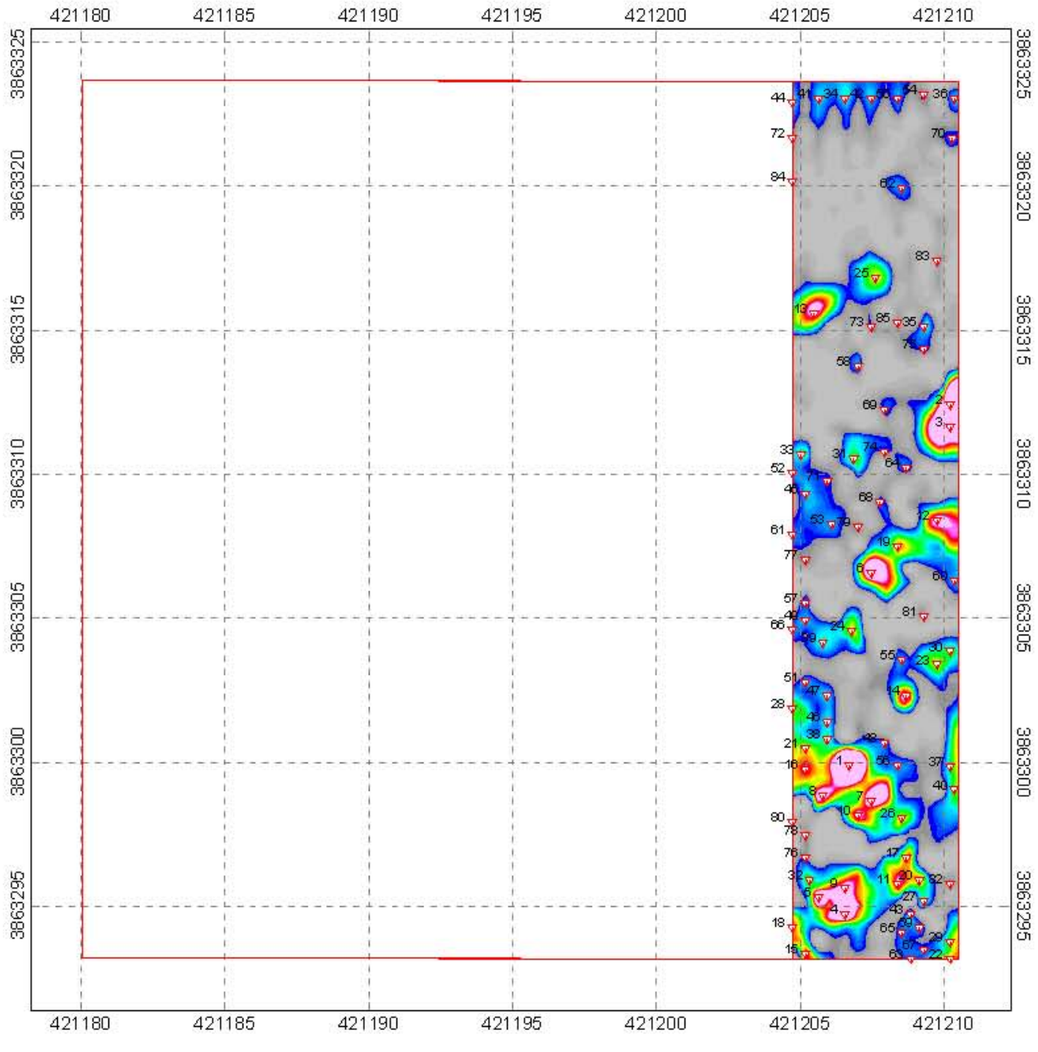
NAD83 / UTM zone 17N

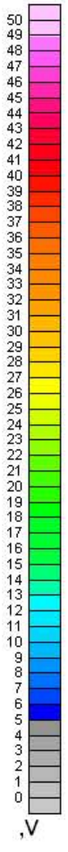
Zapata Engineering

EM61 MK2 Chi2
Grid P-11
Camp Croft, South Carolina

Date of Survey: November 28, 2004

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

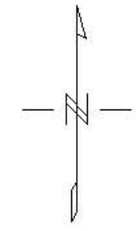




Legend

Area of Investigation

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



Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid P-11
Camp Croft, South Carolina

Date of Survey: November 28, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

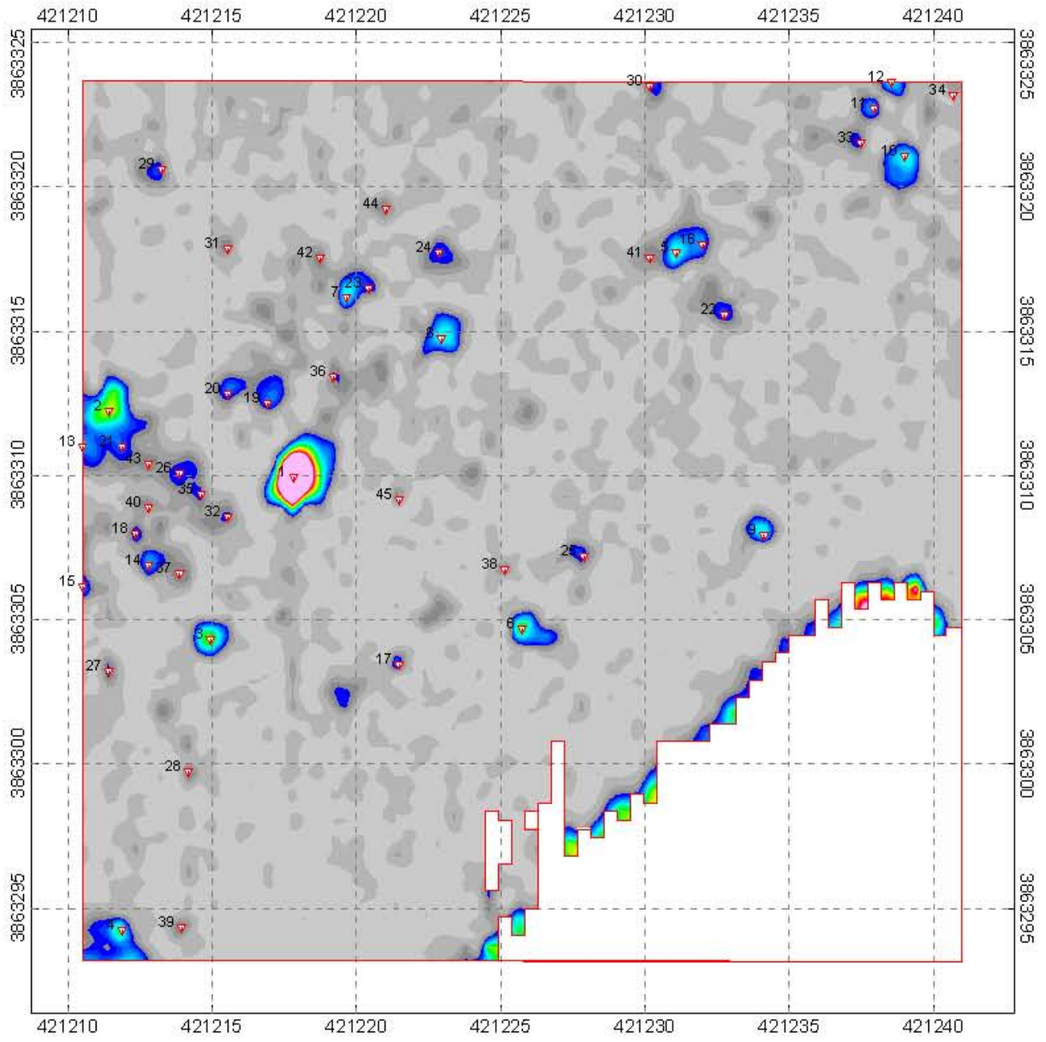
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: P12
Field Book ID:

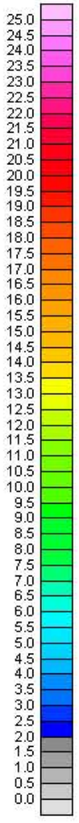
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
P-12_C1	421217.832	3863309.937	24	55		144	P-12_1	11/26/04	601		0	0	01/20/05	CD	0.25	4 x 36	Flashing					1	4		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C10	421239.0112	3863321.053	93.5	91.5		6	P-12_28	11/26/04	40		0	0	01/20/05	CD	0.25	5 x 10	Metal					4	4		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C11	421237.9452	3863322.729	90	97		6	P-12_17	11/26/04	15		0	0	01/20/05	CD			Nut, 1/4"					1	1		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C12	421238.5549	3863323.643	92	100		5	P-12_36	11/26/04	10		0	0	01/20/05	CD		0.5 x 1.5	Screw	0	0			0	0		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C12.1	421238.5549	3863323.643	92	100		5		11/26/04	10		0	0	01/20/05	CD		0.5 x 1.5	metal	0	0			0	0		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C13	421210.5197	3863311.005	0	58.5		4	P-11_3	11/26/04	27		0	0	01/20/05	CD		3	Metal disk nails					2	2		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C16	421232.0024	3863318.008	70.5	81.5		4	P-12_63	11/26/04	30		0	0	01/20/05	CD		36	Wire - Shared with C5	-8	0			0	0		01/24/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-12_C17	421221.4866	3863303.461	36	33.75		4	P-12_85	11/26/04	2		0	0	01/20/05	CD		6 x 4 x 0.25	1/4" screen					3	3		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C19	421216.9187	3863312.527	21	63.5		4	P-12_87	11/26/04	13		0	0	01/20/05	CD		36	Wire	12	0			0	2		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C20	421215.5476	3863312.832	16.5	64.5		3	P-12_61	11/26/04	18		0	0	01/20/05	CD		2	Screw	0	-18			5	5		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C21	421211.8908	3863311.005	4.5	58.5		3	P-12_13	11/26/04	35		0	0	01/20/05	CD		2	Screw, self tap	0	-18						01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C22	421232.7635	3863315.57	73	73.5		3	P-12_5	11/26/04	51		0	0	01/20/05	CD	0.25	4 x 0.75	3/4" T bolt					3	3		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C24	421222.8616	3863317.705	40.5	80.5		3	P-12_98	11/26/04	14		0	0	01/20/05	CD	0.25	2 x 3	Metal					0	0		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C25	421227.8861	3863307.192	57	46		3	P-12_29	11/26/04	8		0	0	01/20/05	CD	0.25	0.25 x 2 x 4	Metal					8	9		01/24/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-12_C26	421213.8711	3863310.09	11	55.5		3	P-12_7	11/26/04	45		0	0	01/20/05	CD		4	Nail/wire - LIP	0	-12			2	2		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C27	421211.4317	3863303.236	3	33		3		11/26/04	2		0	0	01/20/05	CD		0.75	3/4" roller bearing	0	0			2	3		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C27.1	421211.4317	3863303.236	3	33		3		11/26/04	2		0	0	01/20/05	CD			Nail	0	0			0	0		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C28	421214.173	3863299.731	12	21.5		3	P-12_113	11/26/04	5		0	0	01/20/05	CD			Can rim					4	4		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C29	421213.2645	3863320.602	9	90		3	P-12_119	11/26/04	10		0	20.4	01/20/05	CD		2	Ring					1	2		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C3	421214.9359	3863304.301	14.5	36.5		11	P-12_34	11/26/04	36		0	0	01/20/05	CD	0.25	4 x 5	Metal					3	4		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C30	421230.1758	3863323.493	64.5	99.5		2	P-12_124	11/26/04	4		0	0	01/20/05	MD	0.25	0.25 x 1 x 3	Metal/grenade frag	-18	0			24	24		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C31	421215.549	3863317.86	16.5	81		2	P-12_238	11/26/04	8		0	0	01/20/05	CD		2 x 0.5	1/2" bolt					1	1		01/24/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-12_C33	421237.4878	3863321.51	88.5	93		2	P-12_105	11/26/04	8		0	0	01/20/05	CD		2	Screw, self tapping	0	10			0	0		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C34	421240.6876	3863323.185	99	98.5		2	P-12_21	11/26/04	22		0	0	01/20/05	CD			Screw drill/wire	0	12			0	0		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C36	421219.2041	3863313.441	28.5	66.5		2	P-12_14	11/26/04	20		0	0	01/20/05	CD			Reinforced concrete - LIP	12	0			3	5		01/24/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-12_C37	421213.8701	3863306.586	11	44		2	P-12_73	11/26/04	5		0	0	01/20/05	CD			Wire - LIP								01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C38	421225.1438	3863306.736	48	44.5		2	P-12_118	11/26/04	4		0	0	01/20/05	NC			2 x 2 x 2 hole								01/24/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
P-12_C4	421211.8863	3863294.247	4.5	3.5		9	P-12_38	11/26/04	3		0	0	01/20/05	CD	0.25	3	Nails (7)	-8	0			1	3		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C40	421212.8043	3863308.872	7.5	51.5		2	P-12_11	11/26/04	5		0	0	01/20/05	CD		4	1/2 metal bar					3	3		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C41	421230.1741	3863317.551	64.5	80		2	P-12_43	11/26/04	19		0	0	01/20/05	CD		8	Reinforced concrete					1	1		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C42	421218.7482	3863317.554	27	80		2	P-12_47	11/26/04	15		0	0	01/20/05	CD		24	Wire	-8.486563	8.4865629			4	4		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C43	421212.8047	3863310.395	7.5	56.5		2	P-12_15	11/26/04	2		0	0	01/20/05	CD			Rust pile	-12	0			3	3		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C44	421221.0338	3863319.229	34.5	85.5		2	P-12_65	11/26/04	20		0	0	01/20/05	CD			Nail/screw					2	2		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C45	421221.4881	3863309.177	36	52.51		8	P-12_107	11/26/04	30		0	0	01/20/05	CD		36	Wire - Shared with C16					0	0		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C5	421231.0883	3863317.703	67.5	80.5		8.0786467	P-12_22	11/26/04			0	0		CD		36	Wire - Shared with P-12_C16	8	0			0	0		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C6	421225.7526	3863304.679	50	37.75		8	P-12_9	11/26/04	33		0	0	01/20/05	CD		1 x 4	Coat hanger/metal	0	-12			1	1		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C8	421222.9369	3863314.734	40.75	70.75		6	P-12_6	11/26/04	46		0	0	01/20/05	CD		36	Wire/reinforced concrete - LIP								01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-12_C9	421234.1325	3863307.952	77.5	48.5		6	P-12_19	11/26/04	45		0	0	01/20/05	MD	0.5	4 x 4	Metal/smoke grenade M18					6	8		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005

* 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)

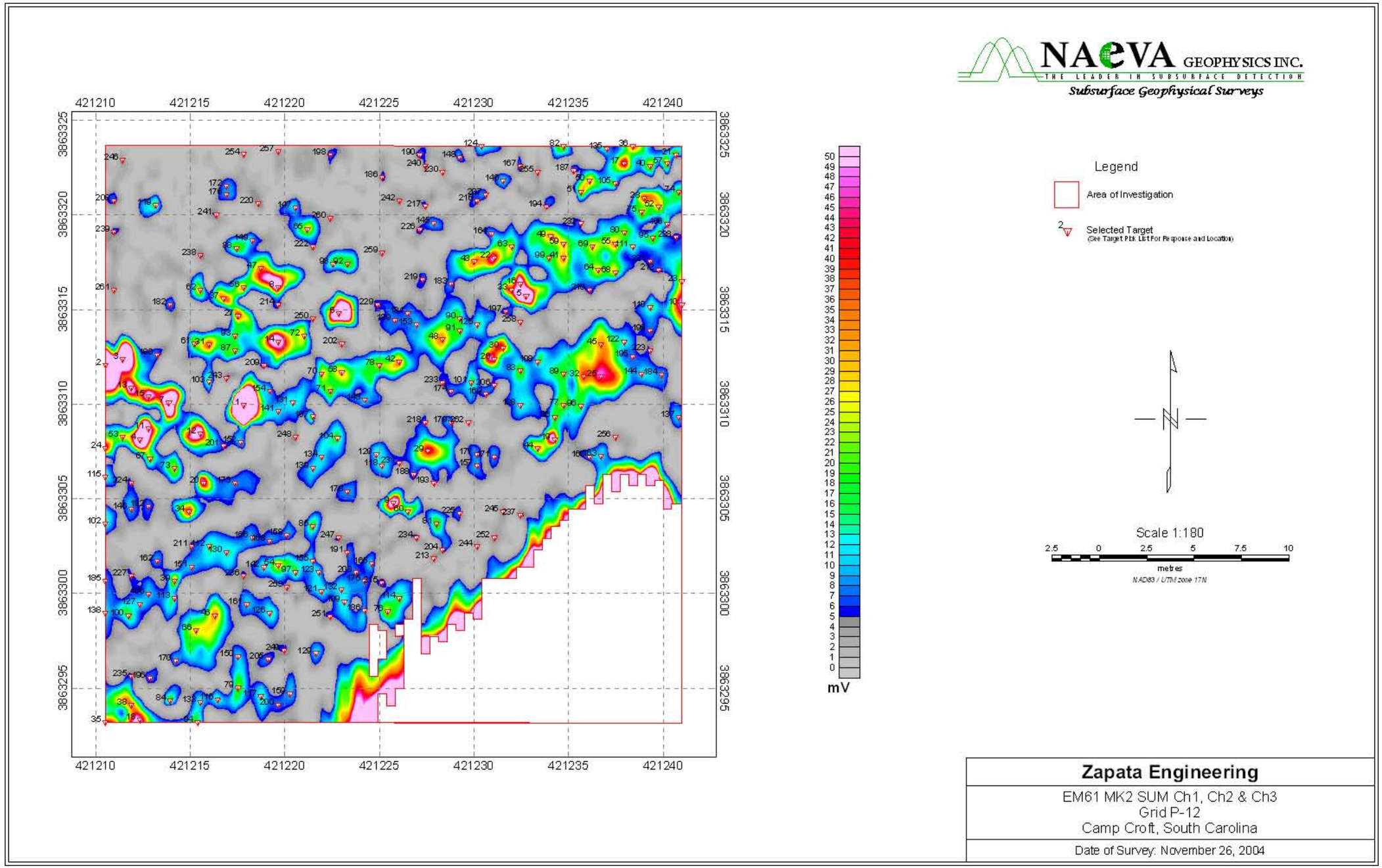
Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid P-12
Camp Croft, South Carolina

Date of Survey: Novmeber 26, 2004


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
421210
421215
421220
421225
421230
421235
421240
3863325
3863320
3863315
3863310
3863305
3863300
3863295
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
mV
Scale 1:180
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid P-12
Camp Croft, South Carolina
Date of Survey: November 26, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: P13
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
P-13_C10	421251.5024	3863316.783	34.5	77.5		12		11/26/04			0	0		CD			Aluminum can					0	0		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C11	421251.5039	3863322.42	34.5	96		9	P-13_1	11/26/04			0	0		CD		10	1" bandings					0	1		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C12	421244.6449	3863309.777	12	54.5		9		11/26/04			0	0		CD		7	Spike	0	0			1	1		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C13	421270.6999	3863323.633	97.5	100		7	R-13_1	11/26/04			0	0		CD			Wire - 36" above ground - LIP								01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C14	421252.8742	3863319.22	39	85.5		5		11/26/04			0	0		MD/CD	0.25		M15 top / aluminum wire	12	0			4	4		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C15	421248.1461	3863299.569	23.5	21		5		11/26/04			0	0		CD			Nail pit - LIP					0	6		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C16	421250.5899	3863322.573	31.5	96.5		5	P-13_2	11/26/04			0	0		CD	2.5		Slag					3	5		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C17	421251.9599	3863318.307	36	82.5		5		11/26/04			0	0		CD	1		Metal	-18	0			5	5		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C18	421250.5838	3863299.973	31.5	22.33		5		11/26/04			0	0		CD			Nail pit - LIP					0	2		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C19	421251.9582	3863312.06	36	62		4		11/26/04			0	0		MD	0.25	2 x 4	M15 part	-12	0			3	3		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C2	421266.5794	3863297.126	84	13		86		11/26/04			0	0		CD	3	12	Wire/nails - LIP (spoils)					0	0		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C20	421262.4666	3863299.26	70.5	20		4		11/26/04			0	0		CD			Gal can lid					0	0		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C21	421246.4721	3863306.12	18	42.5		3		11/26/04			0	0		NC			2 x 2 x 1 (log)								01/31/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
P-13_C22	421266.5824	3863308.4	84	50		3		11/26/04			0	0		CD			Nails	0	-12			0	2		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C23	421267.4943	3863300.325	87	23.5		3		11/26/04			0	0		GEO			Hot rock					2	2		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/22/06
P-13_C24	421244.186	3863302.922	10.5	32		3		11/26/04			0	0		NC			Fence ? 2 x 2 x1								01/31/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
P-13_C25	421260.1842	3863309.62	63	54		3		11/26/04			0	0		MD			Grenade spoon	-12	0			3	3		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C26	421256.9807	3863293.93	52.5	2.5		3		11/26/04			0	0		CD			Nails - LIP					0	1		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C27	421268.4074	3863296.669	90	11.5		3		11/26/04			0	0		CD			Nails / wire					0	0		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C28	421263.8367	3863295.451	75	7.5		3		11/26/04			0	0		CD			Nails					0	2		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C29	421251.954	3863296.673	36	11.5		3		11/26/04			0	0		CD		10	Wire					0	0		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C3	421261.0958	3863300.327	66	23.5		72		11/26/04			0	0		CD	1	30 x 0.5	1/2" pipe					0	0		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C30	421252.8678	3863295.835	39	8.75		3		11/26/04			0	0		CD		19	Wire					1	1		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C31	421265.2128	3863314.037	79.5	68.5		3		11/26/04			0	0		CD		4	Metal clip	16.973126	-16.97313			2	2		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C32	421265.209	3863300.021	79.5	22.5		3		11/26/04			0	0		MD	0.25		M15 top					4	4		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C33	421264.7548	3863310.381	78	56.5		3		11/26/04			0	0		CD		3	Finishing nail	12	0			0	0		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C34	421262.4696	3863310.382	70.5	56.5		3		11/26/04			0	0		CD			Wood with nails					0	0		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C35	421251.9602	3863319.373	36	86		3	P-13_4	11/26/04			0	0		CD			Can, flakes	0	12			3	4		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C37	421264.7545	3863309.314	78	53		2		11/26/04			0	0		CD			Nails	0	0			0	2		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C37.1	421264.7545	3863309.314	78	53		2		11/26/04			0	0		CD			Nails	0	0			0	2		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C38	421256.9844	3863307.641	52.5	47.5		2		11/26/04			0	0		CD			Construction debris - LIP					4	12		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C39	421245.5584	3863307.492	15	47		2		11/26/04			0	0		NC			2 x 24 x 1 log								01/31/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
P-13_C40	421267.036	3863295.45	85.5	7.5		2		11/26/04			0	0		CD			Nail								01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C41	421260.6383	3863298.651	64.5	18		2		11/26/04			0	0		CD			Nail pit - LIP					0	2		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C42	421252.4117	3863299.263	37.5	20		2		11/26/04			0	0		CD			Nail pit - LIP					0	2		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C43	421249.213	3863301.092	27	26		2		11/26/04			0	0		CD		1.5	Metal ring					5	5		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C44	421257.8948	3863293.929	55.5	2.5		2		11/26/04			0	0		CD			Nails - LIP					0	1		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C45	421242.8189	3863317.548	6	80		2	P-13_5	11/26/04			0	0		CD			Metal disk slag					2	2		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C6	421271.1552	3863317.387	99	79.5		21	P-14_17	11/26/04			0	0		CD			White rock - aluminum can - LIP	18	0			2			01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C7	421270.2402	3863313.731	96	67.5		21		11/26/04			0	0		CD		10 x 3 x 0.1	3 x 1/8 strap	-16.97313	16.973126			2	2		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: P13
Field Book ID:

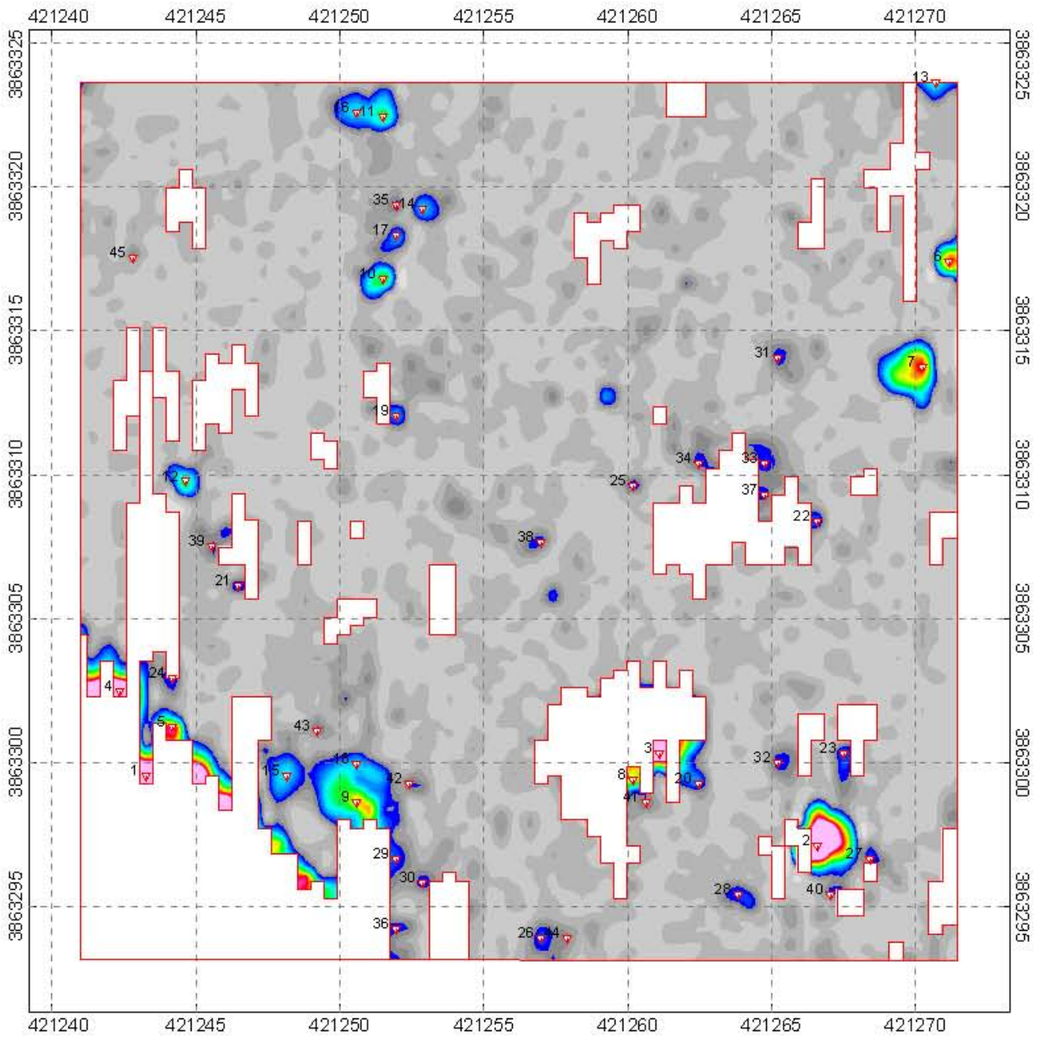
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

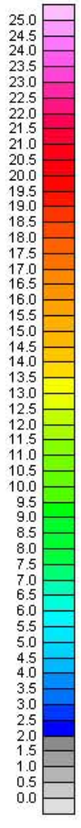
Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	Original Survey								Reacquisition Survey					Dig Results													Post-Dig UXO QC Results			Post-Dig Geophysical QC		
											Offset					Offset				Depth (in)												
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs)	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
P-13_C8	421260.1814	3863299.413	63	20.5		17		11/26/04			0	0		CD	1	30 x 0.5	1/2" pipe					0	0		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-13_C9	421250.5834	3863298.654	31.5	18		16		11/26/04			0	0		CD			Nail pit - LIP					0	2		01/31/05	RLF	NA	DRA	02/22/06	YES	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

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

Scale 1:180

2.5 0 2.5 5 7.5 10

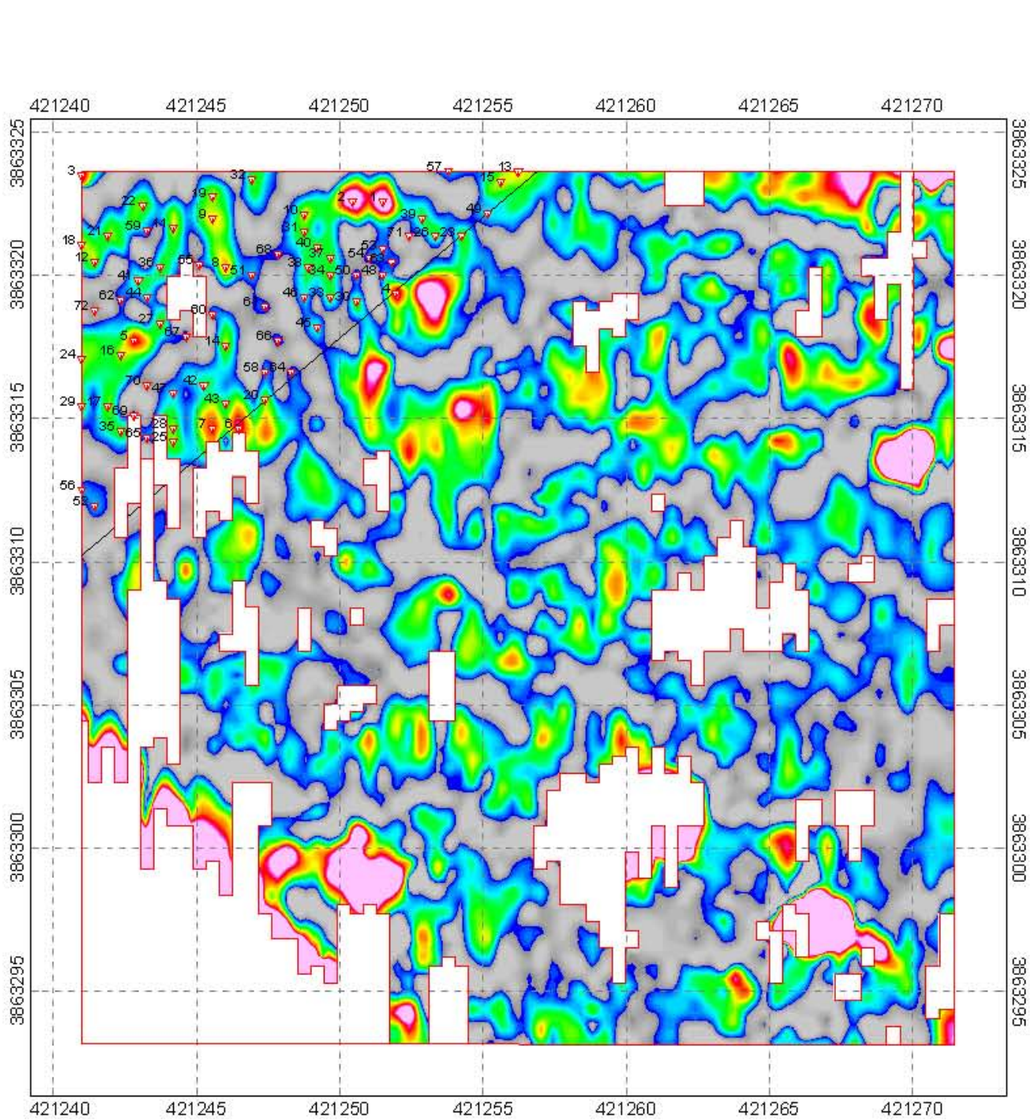
metres

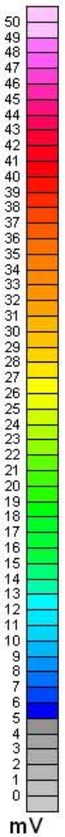
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid P-13
Camp Croft, South Carolina

Date of Survey: November 26, 2004





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

Legend

Area of Investigation

Priority Area Boundary

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

Background Statistics exceed QC metric - See Grids N13_P13 Noise Estimates
No targets selected outside Priority Area (40P).

N

Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid P-13
Camp Croft, South Carolina

Date of Survey: November 26, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: P14
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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, U=unacceptable)	Geophysicist QC Initials	Date
P-14_104	421288.669	3863294.835	56.5	5.5	8.1			12/03/04			0	0		CD			Hot rock - Schon/Fisher								02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_106	421290.4442	3863322.432	62.30182	96.07415	9.7			12/03/04	6		12	0	01/20/05	CD			Nail					2	2		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_113	421271.7625	3863309.465	1	53.5	9.8			12/03/04			0	0		CD		0.25 x 1.5	Metal					2	2		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_118	421295.0708	3863307.021	77.5	45.5	8.1			12/03/04			0	0		CD			Al small					2	2		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_165	421279.5303	3863302.607	26.5	31	4.7			12/03/04			0	0		CD			Beer can	0	-36			0	0		02/01/05	RLF	Yes	HEL	02/01/05	YES	DRA	02/21/06
P-14_181	421278.6148	3863297.123	23.5	13	6.2			12/03/04			0	0		NC			Schon/Fisher								02/01/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
P-14_191	421298.2674	3863296.813	88	12	4.6		P-14_C45	12/03/04			0	0		NC			Schon/Fisher								02/01/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
P-14_209	421271.7613	3863305.199	1	39.5	5.5			12/03/04			0	0		CD			Nails	0	-18			3	3		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_221	421275.2624	3863294.534	12.5	4.5	4.1			12/03/04			0	0		CD		4	Banding					4	4		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_28	421289.4338	3863306.261	59	43	21.0			12/03/04			0	0		MD	0.25		M15 top	0	-24			4	5		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_29	421294.9175	3863303.517	77	34	21.0			12/03/04			0	0		CD	0.25	18	Barb wire - Shared with P-14_C13	18	0			4	4		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_33	421301.3188	3863313.418	98	66.5	18.2			12/03/04	8		0	0	01/20/05	CD		12	Wire					3	3		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_34	421281.0568	3863313.728	31.5	67.5	18.7			12/03/04			0	0		CD		0.75 x 1	Al block					4	5		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_38	421272.5254	3863313.883	3.5	68	17.9			12/03/04			0	0		CD		0.25 x 5	Metal					4	4		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_39	421284.907	3863322.66	44.12842	96.81851	17.7			12/03/04	6		0	0	01/20/05	CD		0.25 x 0.25 x 2	Metal					2	2		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_42	421300.0958	3863297.727	94	15	17.3			12/03/04			0	0		CD			Al can	0	-24			0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_47	421289.1265	3863296.511	58	11	13.3			12/03/04			0	0		NC			Schon/Fisher								02/01/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
P-14_51	421293.0933	3863318.143	71	82	14.6			12/03/04	9		0	0	01/20/05	NC											02/01/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
P-14_52	421300.7058	3863300.012	96	22.5	15.1		P-14_C54	12/03/04			0	0		NC			See C54 - Schon/Fisher								02/01/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
P-14_60	421279.8369	3863309.615	27.5	54	12.9			12/03/04			0	0		NC			Schon/Fisher								02/01/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
P-14_71	421283.6474	3863316.47	40	76.5	11.7			12/03/04			0	0		NC			Schon/Fisher								02/01/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
P-14_74	421290.6505	3863298.491	63	17.5	12.1			12/03/04			0	0		CD			Hot dirt								02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_77	421273.8949	3863307.941	8	48.5	9.3			12/03/04			0	0		CD			Bottle caps	-8.486563	8.4865629			0	2		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_79	421287.0008	3863323.02	51	98	10.3			12/03/04	7		0	0	01/20/05	CD		4 x 0.2	Bolt 3/8"					3	3		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C1	421284.7079	3863294.379	43.5	4		1055.9149	P-14_1	12/03/04			0	0		CD	2		5 gal pail					0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C10	421292.7091	3863305.498	69.75	40.5		10	P-14_10	12/03/04			0	0		MD	0.25		M15 top	16.973126	-16.97313			2	2		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C11	421294.7656	3863305.041	76.5	39		10.164642		12/03/04			0	0		CD		4 x 6	metal	-12	0			4	4		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C11.1	421294.7656	3863305.041	76.5	39		10.164642		12/03/04			0	0		CD		2 x 6	Tube	12	0			4	4		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C12	421293.0897	3863304.737	71	38		9	P-14_8	12/03/04			0	0		MD	1		M15 body	0	-24			4	4		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C13	421295.2224	3863304.127	78	36		9.0577965		12/03/04			0	0		CD			Barb wire - Shared with P-14_29	0	-18			4	4		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C14	421284.7134	3863314.794	43.5	71		9	P-14_5	12/03/04			0	0		NC			Schondstedt / Fisher								02/01/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
P-14_C15	421298.4205	3863299.86	88.5	22		8	P-14_31	12/03/04			0	0		CD			Aluminum can					0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C16	421292.9384	3863308.393	70.5	50		8	P-14_72	12/03/04			0	0		MD/CD	0.2		M15 part / Aluminum can	0	12				6		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C17	421290.8085	3863319.515	63.5	86.5		8	P-14_18	12/03/04	60		0	0	01/20/05	MD	1		M15 Parts					10	11		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-14_C18	421295.6783	3863300.013	79.5	22.5		6.9241066		12/03/04			0	0		CD	10	4	Rommell stake - Shared with P-14_C4								02/01/05	RLF	Yes	HEL	02/01/05	YES	DRA	02/21/06
P-14_C19	421281.9708	3863313.728	34.5	67.5		7	P-14_99	12/03/04			0	0		CD		5	Nail					1	1		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C2	421288.5216	3863313.117	56	65.5		260.74365		12/03/04			0	0		CD			Al pie plate	0	-24			0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C20	421285.6275	3863314.946	46.5	71.5		7	P-14_6	12/03/04			0	0		CD	0.5	18	1" strapping					1	1		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C21	421288.5231	3863318.601	56	83.5		7	P-14_64	12/03/04	27		0	0	01/20/05	CD	0.25	4 x 12	Metal Scrap					0	0		01/24/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-14_C22	421296.1386	3863311.896	81	61.5		7	P-14_19	12/03/04			0	0		CD		12	Wire					6	6		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: P14
Field Book ID: _____

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist: _____
Field Team: _____
COE Design Center POC: Brendan Slater
COE Project Engineer: _____
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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)	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, U=unacceptable)	Geophysicist QC Initials	Date
P-14_C23	421279.8353	3863303.826	27.5	35		6.4013357		12/03/04			0	0		CD			Fedal metal	0	-24			3	4		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C24	421292.9381	3863307.479	70.5	47		6	P-14_48	12/03/04			0	0		CD			Aluminum can					0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C25	421279.6874	3863320.127	27	88.5		5	P-14_199	12/03/04			0	0		CD			Bottle cap	-18	0			2	2		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C26	421281.5087	3863294.685	33	5		5.008707		12/03/04			0	0		NC			Schon/Fisher - No contact confirmed during QC								02/01/05	RLF	Yes	HEL	02/01/05	NA	DRA	02/21/06
P-14_C27	421297.9642	3863302.602	87	31		5	P-14_13	12/03/04			0	0		CD			Barb wire - Shared with C9/C30								02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C28	421271.4616	3863323.633	0	100		4	R-14_12	12/03/04			0	0		CD		18	Wire corner nail								02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C29	421272.3724	3863311.445	3	60		4.2648606		12/03/04			0	0		CD			Aluminum soda can	21.216407	-21.21641			4	4		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C3	421290.1974	3863313.269	61.5	66		70.347733		12/03/04			0	0		CD	4		Trash					0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C30	421298.4214	3863302.907	88.5	32		4	P-14_13	12/03/04			0	0		CD			Barb wire - Shared with C9/C27								02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C31	421301.3193	3863315.551	98	73.5		4	P-14_83	12/03/04	20		0	0	01/20/05	MD			MkII Practice Grende					12	14		01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-14_C32	421292.0233	3863304.585	67.5	37.5		4	P-14_23	12/03/04			0	0		NC			Schondstedt / Fisher								02/01/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
P-14_C33	421295.3767	3863311.439	78.5	60		4	P-14_19	12/03/04			0	0		CD			Aluminum foil	0	-12			0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C34	421294.3062	3863296.053	75	9.5		3.3817317		12/03/04			0	0		CD			Can	24	0			2	2		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C35	421287.9107	3863307.48	54	47		3	P-14_228	12/03/04			0	0		CD			Soda can top	12.729844	12.729844			3	3		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C36	421271.4547	3863298.039	0	16		3.2883625		12/03/04			0	0		CD		3.5	Banding	18	0			1	1		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C37	421287.4538	3863308.023	52.5	48.78		3	P-14_246	12/03/04			0	0		CD		0.5 x 2.5	Metal	0	-30			1	1		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C38	421278.7677	3863299.256	24	20		3.171169		12/03/04			0	0		CD			Nails	0	30			4	6		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C39	421282.4286	3863316.318	36	76		3	P-14_53	12/03/04			0	0		NC			Schondstedt / Fisher								02/01/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
P-14_C4	421296.5922	3863299.251	82.5	20		62.176384		12/03/04			0	0		CD	15		Trash					1	1		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C40	421286.9993	3863317.383	51	79.5		3	P-14_231	12/03/04			0	0		GEO			Hot rocks - Geo confirmed during QC					3	3		02/01/05	RLF	Yes	HEL	02/01/05	YES	DRA	02/21/06
P-14_C41	421285.1711	3863317.383	45	79.5		3	P-14_232	12/03/04			0	0		CD		5	Wire	12.729844	-12.72984			3	3		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C42	421285.1697	3863312.051	45	62		3	P-14_87	12/03/04			0	0		CD		0.75 x 4	Metal	0	12			4	4		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C43	421298.8765	3863296.051	90	9.5		3	P-14_147	12/03/04			0	0		CD			Metal	-36	0			2	2		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C44	421283.3405	3863308.243	39	49.5		3	P-14_240	12/03/04			0	0		CD		0.5 x 4	Metal bar	16.973126	-16.97313			2	2		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C45	421297.9626	3863296.509	87	11		3	P-14_191	12/03/04			0	0		CD			Barb wire	0	24			4	4		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C46	421290.6491	3863293.464	63	1		2.4772282		12/03/04			0	0		CD			Nails (3)	12	0			4	4		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C47	421300.7074	3863305.953	96	42		2	P-14_163	12/03/04			0	0		CD			Aluminum can					0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C48	421277.854	3863300.932	21	25.5		2.3484149		12/03/04			0	0		CD			Pin/metal	30	0			2	2		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C49	421280.1426	3863313.576	28.5	67		2.3242176		12/03/04			0	0		CD			Nail	12	0			0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C5	421295.6791	3863302.755	79.5	31.5		26	P-14_7	12/03/04			0	0		CD			Small metal - LARGER METAL C6 CONTRIBUTING					2	2		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C50	421290.1922	3863293.921	61.5	2.5		2	P-14_134	12/03/04			0	0		CD		36	Banding - Shared with 134					0	0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C51	421278.3094	3863294.838	22.5	5.5		2	P-14_101	12/03/04			0	0		CD		24	Banding	12	0			3	3		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C52	421272.375	3863321.195	3	92		2	P-14_11	12/03/04			0	0		CD		0.375 x 0.375 x	Aluminum ring piece	-30	0			1	1		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C53	421275.1171	3863320.738	12	90.5		2	P-14_12	12/03/04			0	0		GEO			Hot dirt - Geo confirmed during QC	-18	0			12	12		02/01/05	RLF	Yes	HEL	02/01/05	YES	DRA	02/21/06
P-14_C54	421300.2488	3863300.164	94.5	23		2	P-14_52	12/03/04			0	0		NC			Shared with 52 - Schonstedt / Fisher								02/01/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
P-14_C55	421291.1124	3863316.62	64.5	77		2.0930135		12/03/04	13		0	0	01/20/05	GEO			Hot Dirt								01/24/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-14_C56	421290.3491	3863310.831	62	58		2.0922432		12/03/04			0	0		CD			Gal pail lid	-25.45969	-25.45969			4	4		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C57	421271.4587	3863312.664	0	64		2.0127347		12/03/04			0	0		CD		0.5 x 2	Metal	-30	0			2	2		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C6	421296.1363	3863303.365	81	33.5		22	P-14_15	12/03/04			0	0		CD	0.25	4 x 6	Metal					1	1		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C7	421292.6346	3863311.745	69.5	61		21	P-14_25	12/03/04			0	0		NC			Schonstedt / Fisher								02/01/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

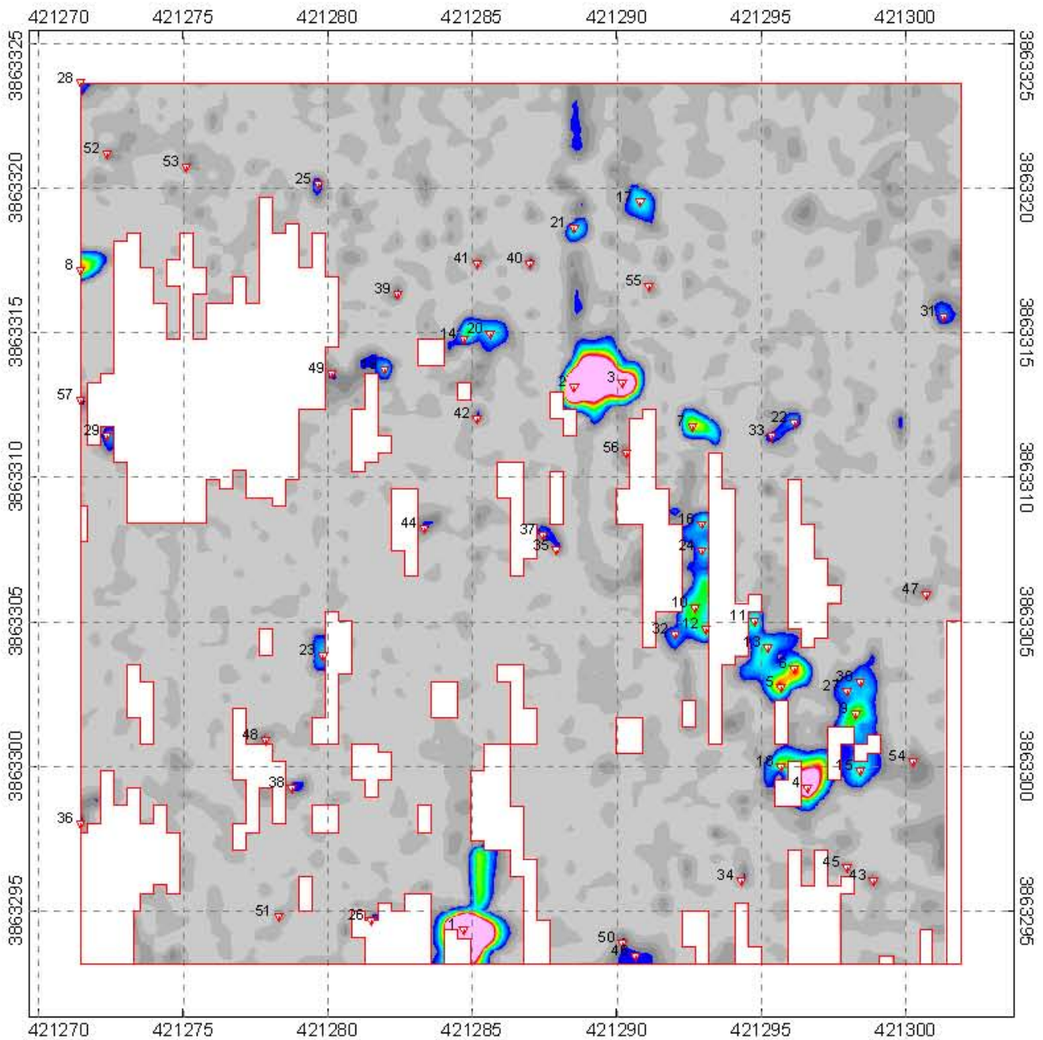
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: P14
Field Book ID:

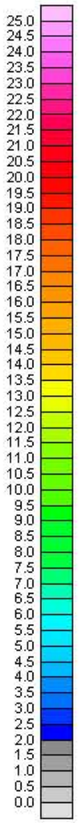
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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, U=unacceptable)	Geophysicist QC Initials	Date
P-14_C8	421271.4599	3863317.158	0	78.75		21	P-14_17	12/03/04			0	0		CD			Aluminum can						0		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C8.1	421271.4599	3863317.158	0	78.75		21		12/03/04			0	0		MD			grenade pull ring	0	0				2		02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-14_C9	421298.2687	3863301.841	88	28.5		12	P-14_4	12/03/04			0	0		CD	0.25	48	Barb wire - Shared with C27/C0					2	2		02/01/05	RLF	NA	DRA	02/22/06	YES	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)



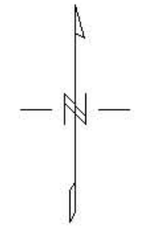


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

2.5 0 2.5 5 7.5 10

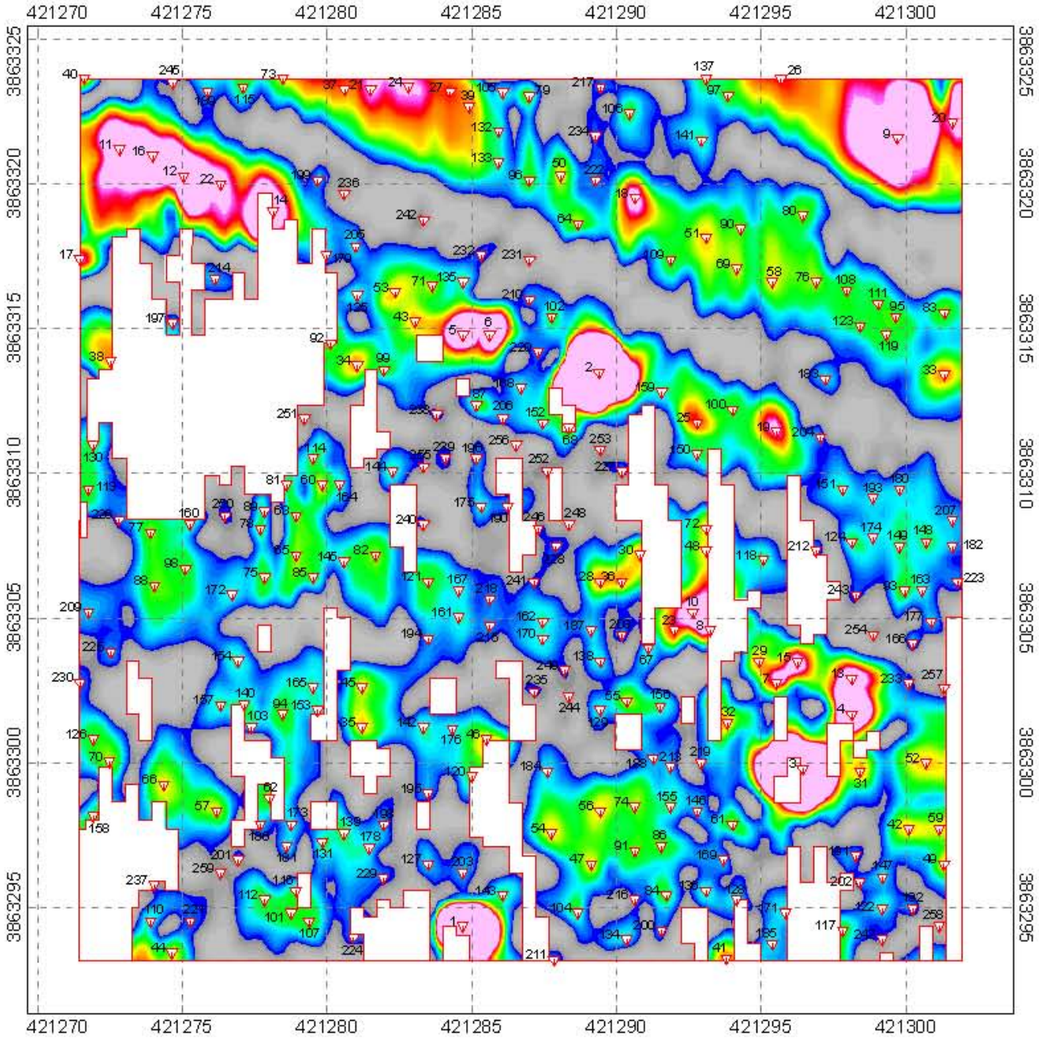
metres

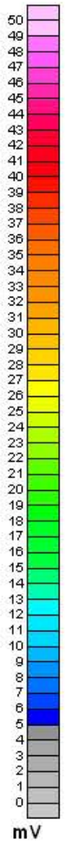
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid P-14
Camp Croft, South Carolina

Date of Survey: December 3, 2004



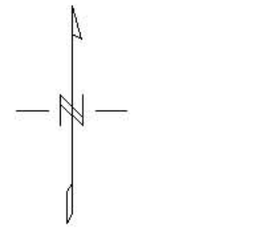


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid P-14
Camp Croft, South Carolina

Date(s) of Survey: December 3, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: P15
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
P-15_10	421329.0454	3863311.887	89	61.5	43.0		P-15_C3	11/21/04	80		12	0	01/11/05	CD			Small tire - left in hole					18	20		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_101	421321.122	3863295.685	63.0098	8.3154	11.0		P-15_C32	11/21/04	16		0	0	01/11/05	CD	0.25	4	Break cable	0	12			2	2		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_105	421321.613	3863297.469	64.6197	14.1726	9.0			11/21/04	12		0	0	01/11/05	CD		1.5	Screw					1	1		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_107	421314.5553	3863294.115	41.4594	3.1579	8.0			11/21/04	10		0	18	01/11/05	CD		1 x 1 x 0.5	Metal	12	0			4	4		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_11	421320.5123	3863305.491	61	40.5	36.0		P-15_C14	11/21/04	42		0	0	01/11/05	MD	0.5		MK II prac					5	7		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_116	421312.8947	3863304.427	36	37	8.0			11/21/04	10		6	6	01/11/05	GEO			Rock	-12	0			1	1		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_14	421319.4498	3863320.269	57.5	89	33.0		P-15_C25	11/21/04	42		0	0	01/11/05	MC-E	0.25		M15 grenade burster	-12	0			1	2		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_15	421315.1788	3863300.465	43.5	24	28.0		P-15_C16	11/21/04	37		0	0	01/11/05	CD	0.5	8	1/2" rebar					2	2		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_18	421301.9238	3863297.422	0	14	32.0		P-15_C12	11/21/04	35		0	12	01/11/05	SA			Rocks, large - many shot gun shells	0	-12			0	18		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_20	421318.3792	3863304.73	54	38	28.0			11/21/04	63		0	18	01/11/05	CD		2.5	Metal ring	-12	0			2	3		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_22	421305.7342	3863303.819	12.5	35	27.0		P-15_C33	11/21/04	95		0	0	01/11/05	CD	0.25	12	Wire	0	12			0	0		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_26	421309.8485	3863307.17	26	46	24.0			11/21/04	39		0	0	01/11/05	CD	0.25	4	Garage door roller					2	4		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_27	421323.5633	3863320.572	71	90	25.0		P-15_C42	11/21/04	57		0	0	01/11/05	MD	0.25	2	M15 grenade top					3	4		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_29	421327.2146	3863301.985	83	29	22.0		P-15_C43	11/21/04	25		0	0	01/11/05	CD		12	Wire	-24	0			2	2		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_32	421316.2455	3863301.379	47	27	21.0		P-15_C41	11/21/04	29		-6	0	01/11/05	CD	0.25	2 x 0.75	3/4" bolt					2	2		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_36	421312.8869	3863300.829	35.9777	25.1922	19.0			11/21/04	28		0	0	01/11/05	CD		3	Ball joint					2	3		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_39	421314.4088	3863297.341	40.9757	13.7451	17.0		P-15_C26	11/21/04	33		0	18	01/11/05	CD		4 x 1	1" banding	-12	0			1	1		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_4	421308.0385	3863294.755	20.0707	5.2528	106.0		P-15_C6	11/21/04	90		0	0	01/11/05	CD	0.25		Barb wire					0	0		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_42	421330.8695	3863296.652	95	11.5	17.0			11/21/04	37		-12	6	01/11/05	CD			Welding rod	-12	0			0	1		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_43	421316.3962	3863295.285	47.5	7	17.0			11/21/04	30		-12	12	01/11/05	CD		12	Barb wire	-12	0			3	3		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_44	421305.8902	3863317.226	13	79	16.0			11/21/04	12		0	0	01/11/05	GEO			Rock	-12	0			3	4		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_5	421326.908	3863294.825	82	5.5	71.0		P-15_C4	11/21/04	95		0	0	01/11/05	CD	1	4 x 6	Metal					0	2		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_59	421303.9075	3863309.152	6.5	52.5	13.0			11/21/04	20		-6	6	01/11/05	CD	0.25	24	Wire					3	3		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_6	421324.1659	3863295.588	73	8	62.0		P-15_C11	11/21/04	106		0	0	01/11/05	CD	0.5	48	Wire					0	1		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_60	421329.8041	3863300.614	91.5	24.5	13.0			11/21/04	25		0	0	01/11/05	CD		12	Wire	-12	0			3	3		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_7	421302.6861	3863302.19	2.4974	29.6518	47.0		P-15_C9	11/21/04	53		-6	6	01/11/05	CD	0.5	3 x 5	Metal					0	1		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_73	421320.4851	3863302.022	60.9138	29.1135	14.0		P-15_C22	11/21/04	19		-12	0	01/11/05	CD		2	2 finishing nails					0	0		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_77	421308.4768	3863305.19	21.5	39.5	12.0		P-15_C36	11/21/04	22		0	0	01/11/05	CD		10	Wire					2	2		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_8	421330.8714	3863303.813	95	35	37.0		P-15_C18	11/21/04	40		-6	6	01/11/05	CD	0.25	12	Weld rod					3	3		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_82	421304.0588	3863305.191	7	39.5	11.0			11/21/04	4		0	18	01/11/05	GEO			Rock					0	0		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_84	421302.5352	3863304.886	2	38.5	13.0		P-15_C13	11/21/04	29		0	0	01/11/05	CD			Can rim	24	0			0	0		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_89	421327.9751	3863297.415	85.5	14	10.0			11/21/04	15		0	0	01/11/05	CD	0.25	12	Welding rod	0	-12			2	2		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_92	421332.0919	3863310.211	99	56	9.0			11/21/04	14		-12	0	01/11/05	CD		6	Nail					4	4		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_C1	421319.5767	3863307.372	57.9279	46.6734		42	P-15_1	11/21/04			0	0		CD	3	30 x 0.5	1/2 x 2 1/2 pipe / reinforced concrete - LIP					6	7		01/27/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_C10	421320.2097	3863313.261	60	66		7	P-15_13	11/21/04			0	0		SA	.25		small arms, 30cal, shell casing, Rusted	0	0			4	4	P15_C10 - #023	1/18/06	barn	NA	DRA	02/22/06	YES	RVW	
P-15_C12	421301.9239	3863297.452	0	14.1		6	P-15_18	11/21/04			0	0		GEO			Hot rock								01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-15_C15	421315.6357	3863300.008	45	22.5		5	P-15_9	11/21/04			0	0		CD	.25	16 x .25 x .25	wire, Rusted	0	0	E	15	2	2	P15_C15 - #020	1/18/06	barn	NA	DRA	02/22/06	YES	RVW	
P-15_C2	421320.6671	3863314.784	61.5	71		30	P-15_2	11/21/04			0	0		CD	15	60	Rammel stake					4	6		01/27/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_C20	421317.4625	3863294.675	51	5		4	P-15_75	11/21/04			0	0		MD	0.25	4 x 3	M15 part					0	1		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-15_C21	421325.4253	3863302.68	77.1268	31.2779		4	P-15_48	11/21/04			0	0		CD			Culvert					0	0		01/27/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

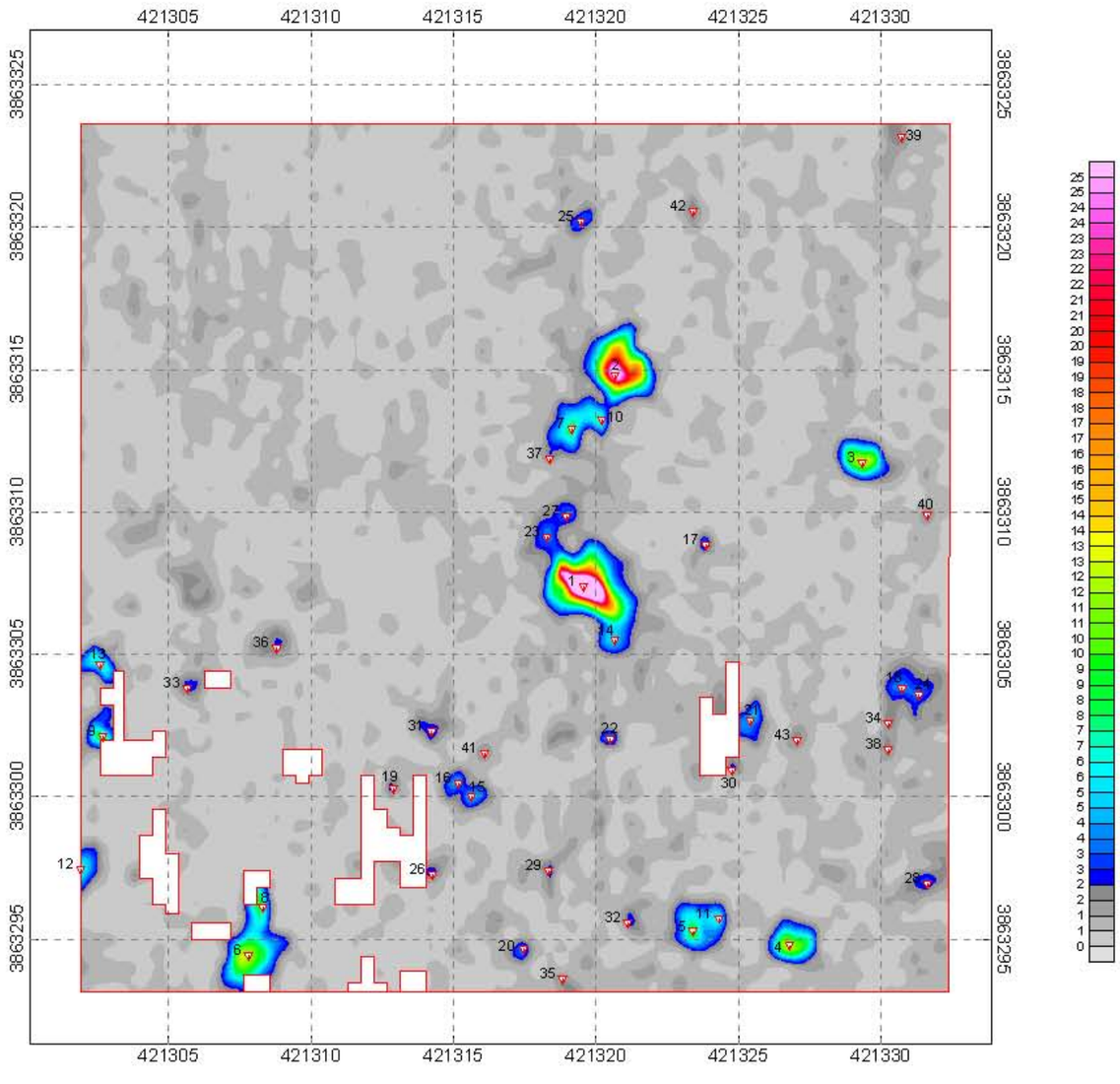
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: P15
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING /NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
P-15_C23	421318.2869	3863309.106	53.6932	52.3618		3	P-15_47	11/21/04			0	0		CD		36	Wire - LIP	0	-12			2	10		01/27/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_C24	421331.3366	3863303.594	96.5268	34.2827		3		11/21/04			0	0		CD		12	Welding Rod					3	4		01/27/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_C28	421331.6313	3863296.957	97.5	12.5		3		11/21/04			0	0		CD		12	Wire - LIP					3	7		01/27/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_C3	421329.3501	3863311.735	90	61		12	P-15_10	11/21/04			0	0		CD			Small tire - LIP as 10								01/27/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-15_C30	421324.7768	3863300.92	75	25.5		3		11/21/04			0	0		CD			Aluminum can	12	0			0	0		01/27/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_C31	421314.2403	3863302.297	40.4181	30.0102		3	P-15_102	11/21/04			0	0		CD			Nail					2	2		01/27/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_C33	421305.6563	3863303.816	12.2442	34.9884		2	P-15_22	11/21/04			0	0		CD		0.5 x 0.5 x 5	Bar	24	0			3	3		01/27/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_C34	421330.2617	3863302.594	93	31		2	P-15_132	11/21/04			0	0		CD		3	Welding pad	12.729844	-12.72984			6	6		01/27/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_C35	421318.8333	3863293.609	55.5	1.5		2	P-15_106	11/21/04			0	0		CD			Porta potty								01/27/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-15_C37	421318.3812	3863311.89	54	61.5		2		11/21/04			0	0		CD		12	Banding	18	0			8	8		01/27/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-15_C38	421330.2614	3863301.68	93	28		2	P-15_132	11/21/04			0	0		CD		7	Welding rod - 3 spots with 12"					2	6		01/27/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-15_C41	421316.0932	3863301.543	46.5	27.54		2	P-15_32	11/21/04			0	0		GEO			Hot rock - on road								01/27/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-15_C6	421307.8003	3863294.435	19.2892	4.2026		10	P-15_4	11/21/04			0	0		CD			Barb wire small pieces - LIP					0	0		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
P-15_C7	421319.1546	3863312.919	56.5374	64.8762		8	P-15_16	11/21/04			0	0		CD	2	4 x 2 x .5	multiple pieces of metals, Badly Rusted	0	0	NA	0	7	8	P15_C7 - #021	1/18/06	barn	YES	TF	01/26/06	YES	RVW	01/25/06
P-15_C8	421308.311	3863296.124	20.96386	9.746334		7.7021347		11/21/04			0	0		CD			electric debris - LIP	0	-36			1	1		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-15_C8.1	421308.311	3863296.124	20.96386	9.746334		7.7021347		11/21/04			0	0		CD			Reinforced concrete	36	0			1	1		01/31/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005

* 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

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

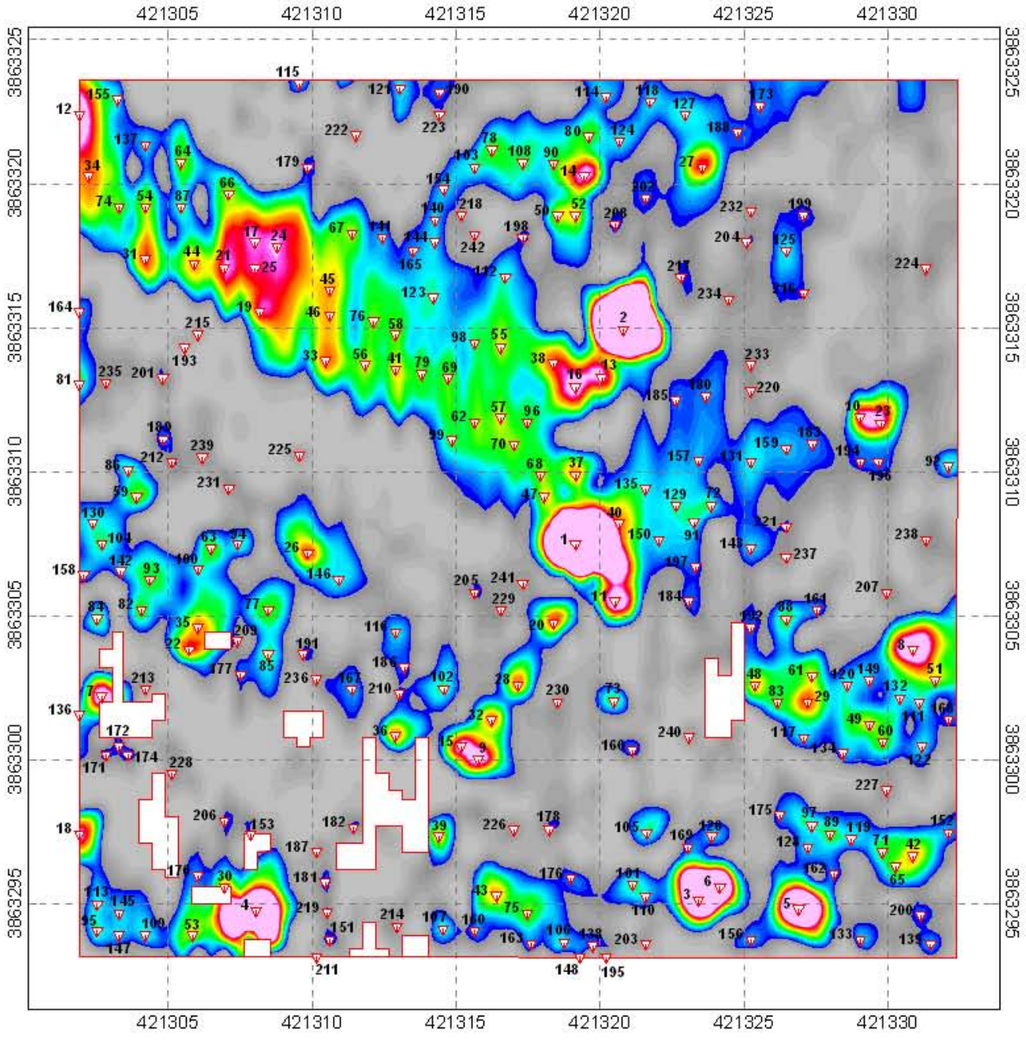
Scale 1:180

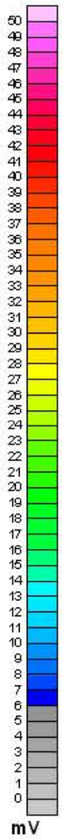
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid P-15
Camp Croft, South Carolina

Date of Survey: November 21, 2004, 2004



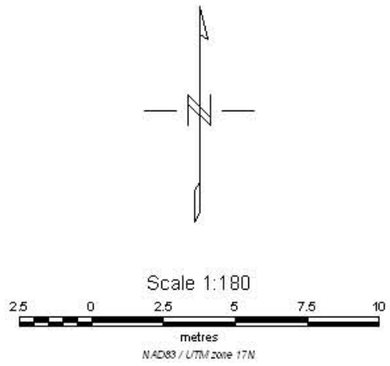


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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

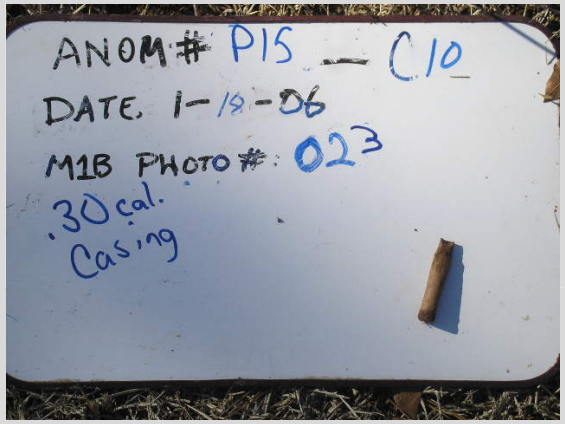


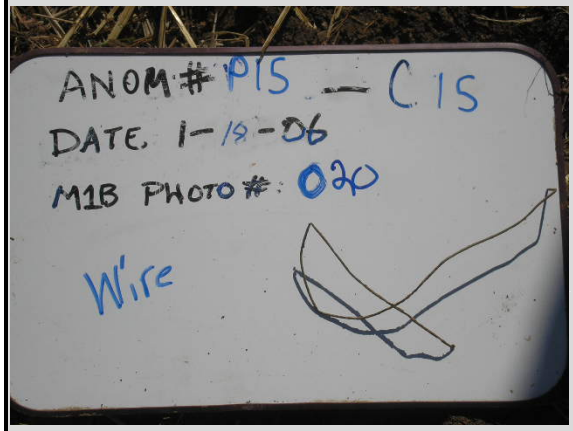
Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid P-15
Camp Croft, South Carolina

Date(s) of Survey: November 21, 2004

GRID P15 DIG PHOTOS





ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

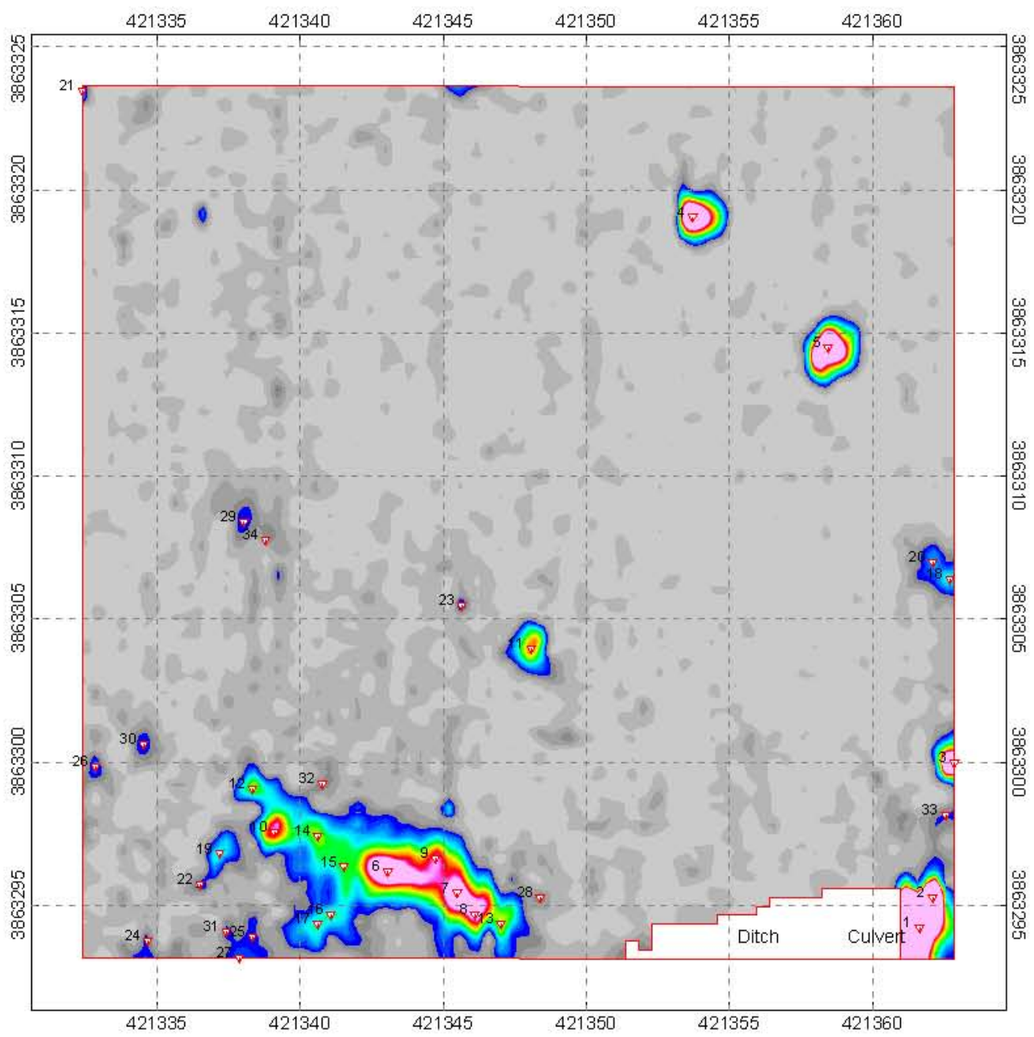
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: P16
Field Book ID:

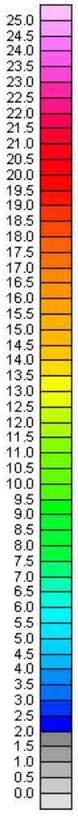
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
P-16_10	421339.2488	3863297.716	22.5	15	154.0		P-16_C10	11/21/04	210		-6	0	01/11/05	CD	1	8 x 7	Paint can / weld rods	-4.243281	4.2432815			4	8		01/13/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-16_135	421354.7898	3863303.806	73.5	35	4.0			11/21/04	3.5		0	-12	01/17/05	CD		0.5 x 0.5	Aluminum - fringe	-4.243281	-4.243281			2	2		02/02/05	HEL	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-16_16	421362.5603	3863306.698	99	44.5	54.0		P-16_C18 / P-17	11/21/04	150		-6	18	01/11/05	CD			PVC cap/pipe - fringe pin flag (on-hold)	10	0			3	5		02/02/05	HEL	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-16_17	421338.3337	3863293.908	19.5	2.5	57.0		P-16_C25	11/21/04	87		6	12	01/11/05	CD	0.25	20	Weld rod	0	12			4	4		01/12/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-16_23	421348.3885	3863293.753	52.5	2	31.0			11/21/04	25		0	0	01/11/05	GEO	0.25	1 x 1	Rock	3	0			2	3		01/12/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-16_24	421340.9251	3863299.392	28	20.5	28.0		P-16_C32	11/21/04	49		9	0	01/11/05	CD	0.25	6 x 4	Weld rods	0	8			3	4		01/13/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-16_26	421337.8785	3863300.611	18	24.5	25.0			11/21/04	40		0	9	01/11/05	CD	0.5	3 x 2	Hasp/weld rods	8	0			5	5		01/13/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-16_27	421334.5269	3863300.612	7	24.5	25.0		P-16_C30	11/21/04	25		12	6	01/11/05	CD	0.5	7 x 7	Hasp/weld rods	0	4			6	7		01/13/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-16_29	421338.7946	3863308.228	21	49.5	23.0		P-16_C34	11/21/04	30		0	0	01/11/05	CD	0.25	3 x 0.5	Weld rods	0	1			6	6		01/13/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-16_46	421354.7885	3863298.931	73.5	19	10.0			11/21/04	13		0	0	01/11/05	CD	0.2	2 x 0.375	Square nail	8.4865629	8.4865629			0.5	0.5		01/12/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-16_47	421341.6876	3863302.286	30.5	30	10.0			11/21/04	10		6	6	01/11/05	CD	0.25	6 x 0.187	Weld rod	-6.364922	6.3649222			3	3		01/13/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-16_5	421343.0571	3863296.192	35	10	361.0		P-16_C6	11/21/04	40		0	0	01/11/05	CD	4	18 x 8	Weld rods (60 pcs)	0	0			4	4		01/12/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-16_57	421341.0792	3863305.79	28.5	41.5	10.0			11/21/04	6		6	6	01/11/05	CD	0.25	5 x 0.187	Weld rod	0	3			6	6		01/13/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-16_71	421344.5821	3863301.981	40	29	8.0			11/21/04	6		0	0	01/11/05	CD	0.05	1 x 0.2	Tubing 3/8"	0	1			3	3		01/12/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-16_72	421336.3606	3863321.483	13	93	7.0			11/21/04	12		0	0	01/11/05	GEO	2	5 x 4	Rock	5	0			4	5		01/13/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-16_9	421348.0866	3863303.96	51.5	35.5	142.0		P-16_C11	11/21/04	155		0	0	01/11/05	CD		4 x 4	Sprinkler head	8	0			0	0		01/13/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005
P-16_C11	421348.0866	3863303.96	51.5	35.5		18	P-16_9	11/21/04			0	0		CD			Sprinkler head								01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-16_C12	421338.3351	3863299.088	19.5	19.5		13	P-16_21	11/21/04			0	0		CD	1	8 x 6	Paint can					8	10		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-16_C13	421347.0176	3863294.363	48	4		13	P-16_11	11/21/04			0	0		CD	0.5	10	Weld rod	5.6577086	-5.657709			4	4		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-16_C14	421340.6199	3863297.411	27	14		12	P-16_12	11/21/04			0	0		CD	0.5	10	8 pcs weld rod - more left in hole	8	0			6	10		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-16_C15	421341.5337	3863296.345	30	10.5		10	P-16_13	11/21/04			0	0		CD	1	18	10 pcs weld rod - more left in hole	0	-10			8	10		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-16_C16	421341.0762	3863294.669	28.5	5		8.4037247		11/21/04			0	0		CD	1	20	8 pcs weld rod - left pcs in hole	7.0721358	-7.072136			6	8		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-16_C17	421340.619	3863294.364	27	4		7	P-16_40	11/21/04			0	0		MD	1	6 x 4	M15 grenade - P16 C17	6.3649222	-6.364922			2	3		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-16_C19	421337.1919	3863296.803	15.75	12		7	P-16_14	11/21/04			0	0		CD	0.5	6 x 1.5	Metal	-4.243281	-4.243281			1	1		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-16_C21	421332.4002	3863323.434	0	99.4		4	P-16_19	11/21/04			0	0		CD	0.25	4	Old nail	11.315417	-11.31542			2	2		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-16_C22	421336.5061	3863295.737	13.5	8.5		4	P-16_66	11/21/04			0	0		CD	0.25	6	Wire	10	0			4	4		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-16_C24	421334.6774	3863293.757	7.5	2		3.3915269		11/21/04			0	0		CD	0.25	6	Weld rod					3	3		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-16_C25	421338.3337	3863293.908	19.5	2.5		3	P-16_17	11/21/04			0	0		CD	0.5	10	8 pcs weld rod - left more in hole	8	0			5	6		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-16_C26	421332.8508	3863299.851	1.5	22		3	P-16_32	11/21/04			0	0		CD	0.5	10	Weld rod	-6	0			4	4		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-16_C27	421337.8765	3863293.146	18	0		3.1572481		11/21/04			0	0		CD	0.5	10	6 pcs weld rod	0	-10			5	5		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-16_C28	421348.389	3863295.276	52.5	7		3	P-16_42	11/21/04			0	0		CD	0.25	4	Weld rod	-12	0			5	5		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-16_C29	421338.0329	3863308.381	18.5	50		3	P-16_30	11/21/04			0	0		CD	1	20	7 pcs weld rod - more deeper	0	2			5	7		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-16_C3	421362.8631	3863299.995	100	22.5		99	P-16_3	11/21/04			0	0		CD	0.25	3.5	Weld rod	12.729844	12.729844			3	3		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-16_C31	421337.4197	3863294.061	16.5	3		2.5255764		11/21/04			0	0		CD	0.5	14	Weld rod/barb wire - left more in hole	-8	0			6	6		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-16_C7	421345.4944	3863295.429	43	7.5		39	P-16_6	11/21/04			0	0		CD	0.5	12	Weld rods - additional find pie pan	3.5360679	3.5360679			3	3		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-16_C8	421346.1036	3863294.667	45	5		35	P-16_8	11/21/04			0	0		CD	0.25	9	Weld rod	2.8288543	-2.828854			4	4		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-16_C9	421344.733	3863296.648	46.5	11.3		26.465605		11/21/04			0	0		CD		0.5 x 0.25	Geo rock	20	0			1	1		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005

* 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

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

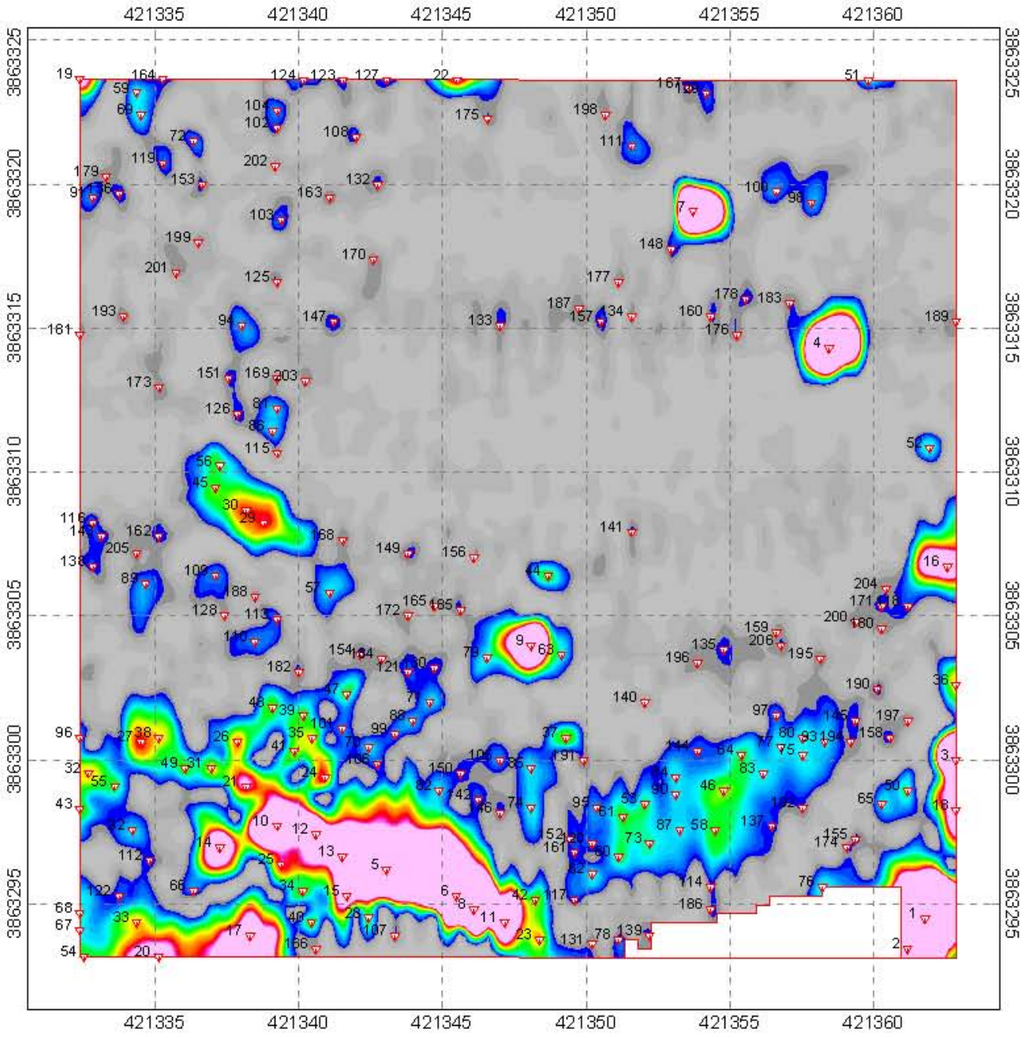
Scale 1:180

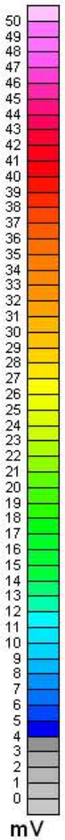
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid P-16
Camp Croft, South Carolina

Date of Survey: November 21, 2004





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)

Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid P-16
Camp Croft, South Carolina

Date of Survey: November 21, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

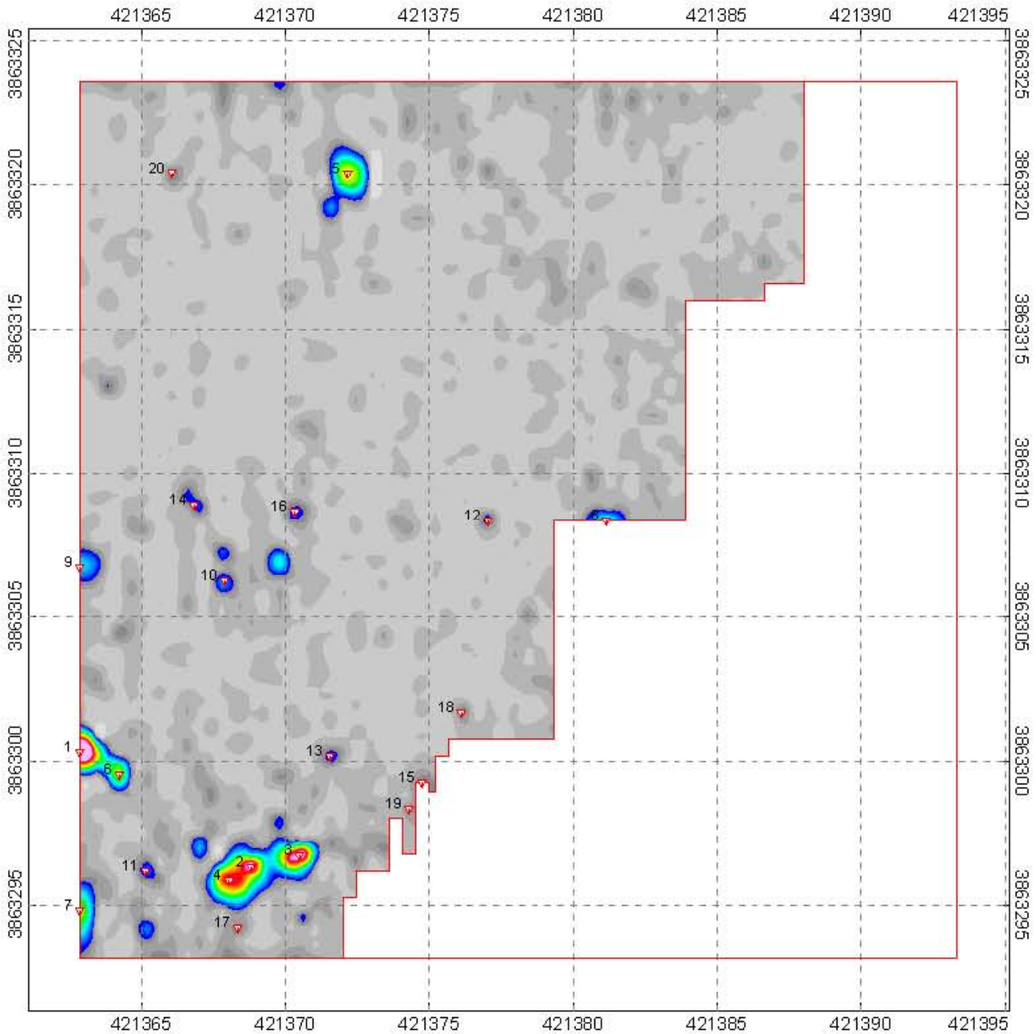
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: P17
Field Book ID:

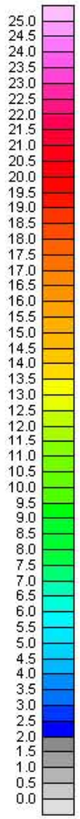
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
P-17_C1	421362.8632	3863300.299	0	23.5		53	P-17_2	11/25/04			0	0		CD		14	Stationary 14" pipe	-9.90099	-9.90099			0			01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-17_C10	421367.8933	3863306.241	16.5	43		4	P-17_96	11/25/04			0	0		GEO		4 x 2	Geo rock	0	28						01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-17_C11	421365.148	3863296.186	7.5	10		4		11/25/04			0	0		GEO		0.5 x 0.5	Geo rock	18	0						01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-17_C12	421377.0361	3863308.372	46.5	50		3		11/25/04			0	0		CD	0.25	9	Wire	24	0			0	0.5		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-17_C13	421371.5493	3863300.147	28.5	23		3	P-17_10	11/25/04			0	0		CD	1		Metal chucks	0	0				8		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-17_C13.1	421371.5493	3863300.147	28.5	23		3		11/25/04			0	0		CD			rack	0	0				3		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-17_C14	421366.8272	3863308.907	13	51.75		3	P-17_44	11/25/04			0	0		GEO		1.5 x 1.5	Geo rock	14	0			5	5		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-17_C15	421374.7493	3863299.232	39	20		2	P-17_12	11/25/04			0	0		CD	2	24	Rebar	-18	0			0.25	12		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-17_C17	421368.3479	3863294.205	18	3.5		2	P-17_46	11/25/04			0	0		CD			Roadway bed (geo)								01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-17_C18	421376.1211	3863301.67	43.5	28		2	P-17_69	11/25/04			0	0		GEO		1 x 1	Geo rock	0	24			3	3		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-17_C19	421374.292	3863298.318	37.5	17		2		11/25/04			0	0		GEO		2 x 1	Geo rock	0	-14			0	0.5		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-17_C2	421368.8055	3863296.398	19.5	10.5		33	P-17_4	11/25/04			0	0		CD	2	30 x 1	1" pipe					0	1		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-17_C3	421370.482	3863296.719	25	11.75		26	P-17_3	11/25/04			0	0		GEO		5 x 3	Geo rock	-8	0			3			01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-17_C4	421368.0435	3863295.881	17	9		24	P-17_5	11/25/04			0	0		CD	1	24 x 3	Pipe					1	1.5		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-17_C5	421372.1621	3863320.408	30.5	89.5		14	P-17_6	11/25/04			0	0		CD			Sprinkler head					0			01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-17_C6	421364.2345	3863299.538	4.5	21		13	P-17_7	11/25/04			0	0		CD	1	24 x 0.25	1/4" bolt					6	18		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
P-17_C7	421362.8618	3863294.812	0	5.49		13	P-17_1	11/25/04			0	0		CD			Culvert (roadway)								01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005

* 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)

N

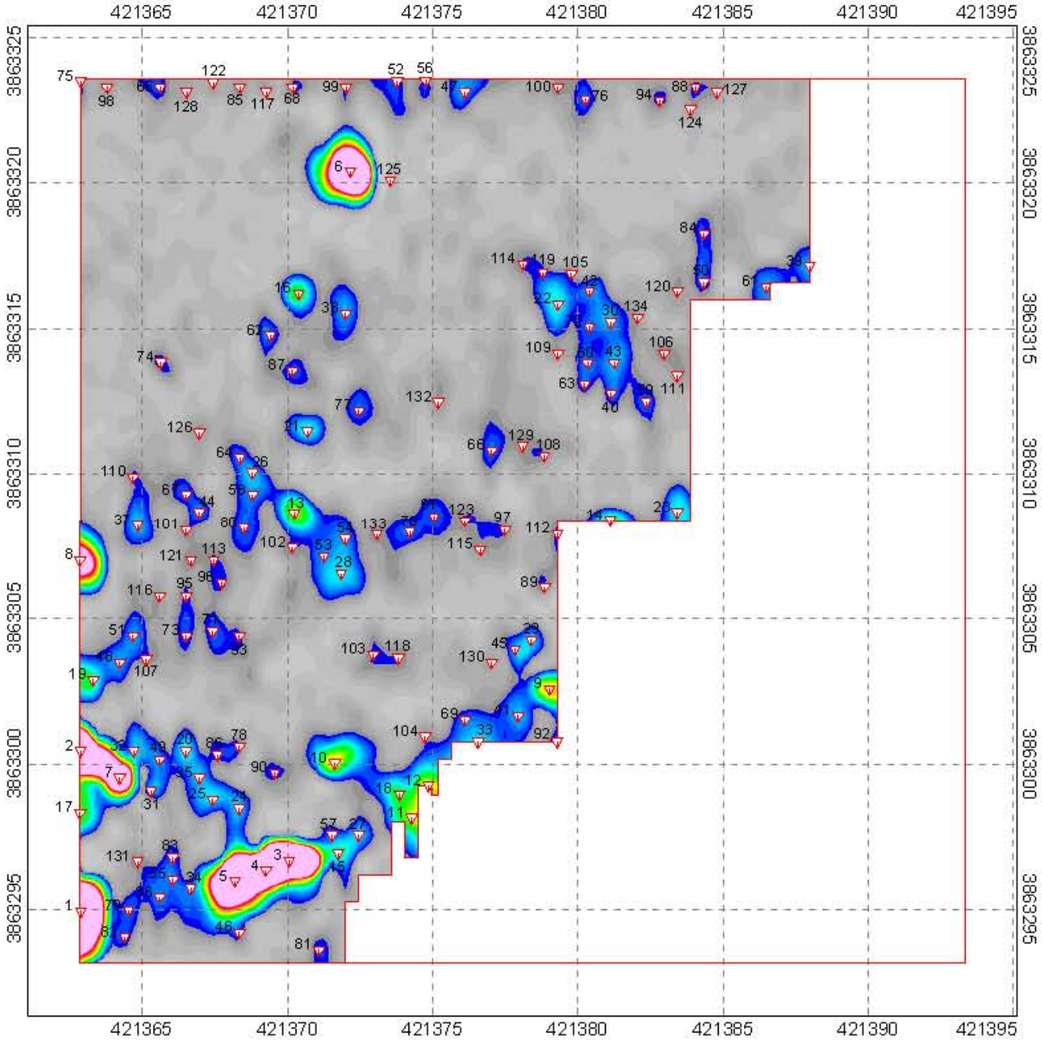
Scale 1:180

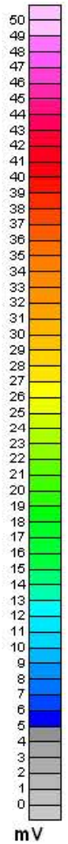
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid P-17
Camp Croft, South Carolina

Date of Survey: November 25, 2004





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)

Scale 1:180

2.5 0 2.5 5 7.5 10
metres

NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid P-17
Camp Croft, South Carolina

Date(s) of Survey: November 25, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

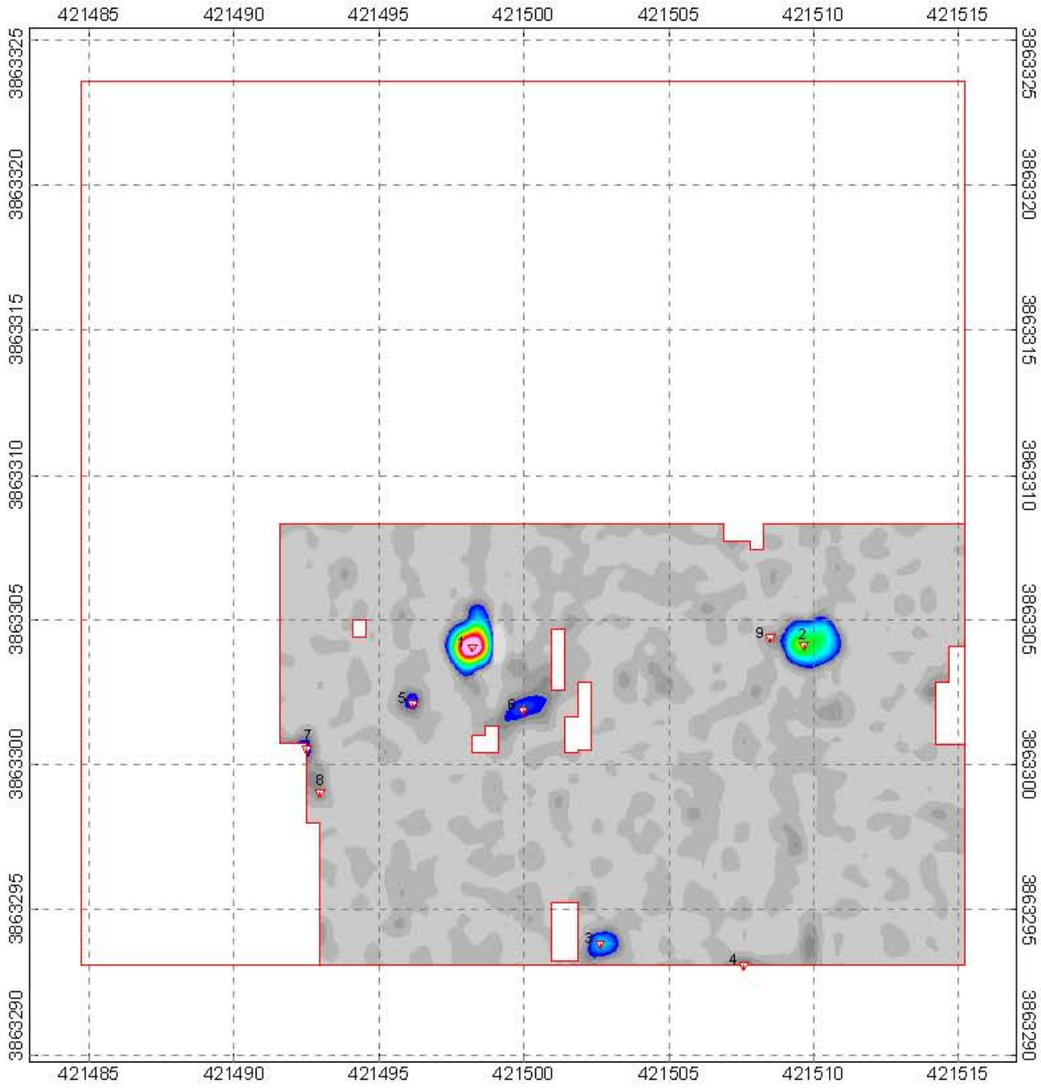
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: P21
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
P-21_1	421498.21	3863304.241	44.2138	36.5419	262.0		P-21_C1	12/01/04	200		12	0	01/09/05	CD	2	0.375 x 24	Rebar	0	-12			0	12		01/12/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_10	421496.6214	3863300.724	39	25	18.0			12/01/04			0	0		GEO			large rock							P21_10 - #062/P21_10a - #067	01/17/06	barn	NA	DRA	02/22/06	YES	RVW	
P-21_11	421503.477	3863302.856	61.5	32	15.0			12/01/04			0	0		CD	.25	8 x .125 x .125	8 inch barbed wire, Rusted	-9	-16	NA	NA	2	3	P21_11 - #037/P21_11a - #069	1/24/06	ddm	YES	TF	01/26/06	YES	RVW	01/25/06
P-21_12	421505.1794	3863293.383	67.0871	0.924	15.0			12/01/04	19		0	0	01/09/05	GEO			Geo dirt/rock					0	18		01/12/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_13	421499.2113	3863304.228	47.5	36.5	14.0			12/01/04	135		0	0	01/09/05	CD	0.25	6	Nails (4)	5.6577086	5.6577086			0	0		01/12/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_15	421501.736	3863303.221	55.786	33.1973	7.0			12/01/04	34		0	6	01/09/05	CD	0.25	6	Nail (1)	9.9009901	-9.90099			0	2		01/12/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_19	421505.3052	3863306.36	67.5	43.5	7.0			12/01/04	7		18	6	01/09/05	MD	0.5	2	MK II frag	0	-18			0	0		01/12/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_2	421502.6961	3863293.801	58.937	2.2938	43.0		P-21_C3	12/01/04	75		18	-6	01/09/05	CD	0.25	8	Survey pin	0	-2			0	4		01/12/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_20	421501.4025	3863304.952	54.6913	38.8742	7.0			12/01/04	12		18	-6	01/09/05	CD	0.05	4	Wire	6	0			0	0		01/12/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_3	421500.4008	3863302.572	51.4039	31.0665	42.0			12/01/04	45		12	-18	01/09/05	CD	0.25	10	Wire	0	10			0	0		01/12/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_32	421505.6099	3863305.294	68.5	40	4.0			12/01/04	13		0	6	01/09/05	CD	0.25	2	Steel cap	5.6577086	-5.657709			1	1		01/12/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_33	421505.3052	3863297.521	67.5	14.5	4.0			12/01/04	3		0	0	01/09/05	GEO	3	4 x 6	Rock	4.2432815	4.2432815			0	1		01/12/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_4	421496.165	3863302.154	37.5019	29.693	37.0		P-21_C5	12/01/04	50		30	0	01/09/05	CD	0.25	8	Survey pin	5.6577086	5.6577086			0	4		01/12/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_44	421499.8207	3863295.389	49.5	7.5	3.0			12/01/04	4		0	0	01/09/05	CD	0.01	1	Nail	-2	0			0	0		01/12/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_5	421509.9994	3863304.118	82.9063	36.1462	37.0		P-21_C2	12/01/04	67		0	0	01/09/05	CD	1	18	Wire	0	18			0	0		01/12/05	HEL	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_6	421514.0044	3863302.675	96.0507	31.415	24.0			12/01/04			0	0		GEO	7	10 x 8 x 2		0	0			0	0	P21_6 - #040	1/24/06	ddm	YES	TF	01/26/06	YES	RVW	02/22/06
P-21_63	421503.9341	3863300.112	63	23	3.0			12/01/04	3		12	0	01/09/05	CD	0.05	6	Nail/wire	8.4865629	-8.486563			0	0		01/12/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_8	421504.3911	3863303.16	64.5	33	20.0			12/01/04	15		12	-12	01/09/05	CD	0.5	6	Horse shoe (1/2)	-3	0			0	0		01/12/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_9	421498.4496	3863302.857	45	32	18.0			12/01/04			0	0		CD	.5	32 x .5 x .5	.5 inch rebar, Rusted	0	34	NA	NA	0	0	P21_9 - #036	1/24/06	ddm	YES	TF	01/26/06	YES	RVW	01/25/06
P-21_C6	421499.9837	3863301.893	50.0351	28.8396		3	P-21_7	12/01/04			0	0		CD	.25	3 x .125 x .125	3 inch nail, Rusted	0	0	NA	NA	0	0	P21_C6 - #038/P21_C6a - #068	1/24/06	ddm	NA	DRA	02/22/06	YES	RVW	
P-21_C9	421508.5045	3863304.378	78	37		2		12/01/04			0	0		CD	.25	8 x .25 x .25	wire, Rusted	0	0	NA	0	4	4	P21_C9 - #039	1/24/06	rly	NA	DRA	02/22/06	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)

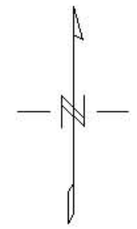


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

2.5 0 2.5 5 7.5 10

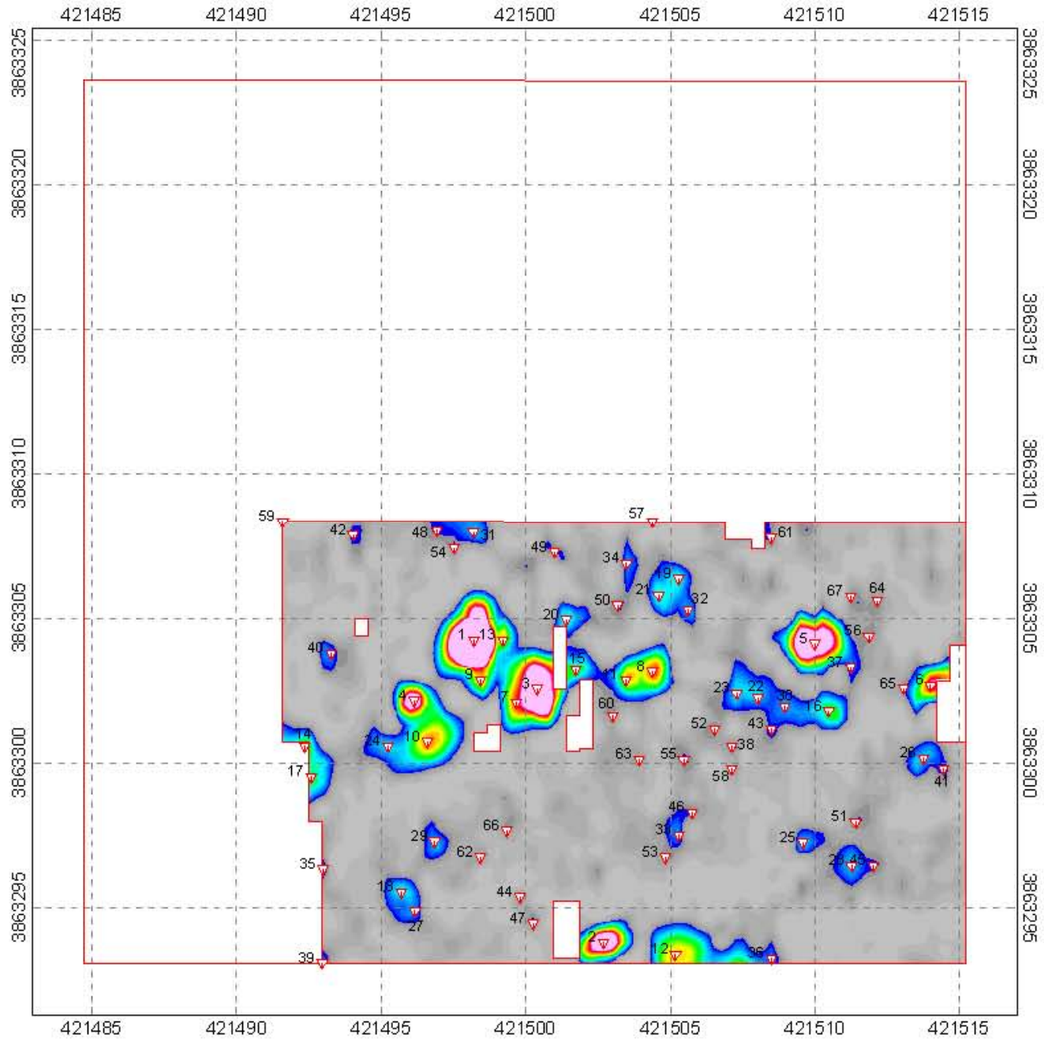
metres

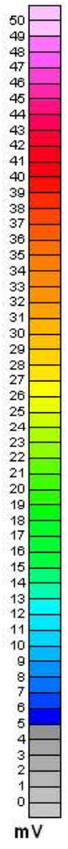
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid P-21
Camp Croft, South Carolina

Date of Survey: December 1, 2004



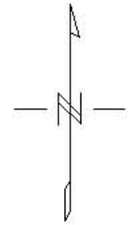


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

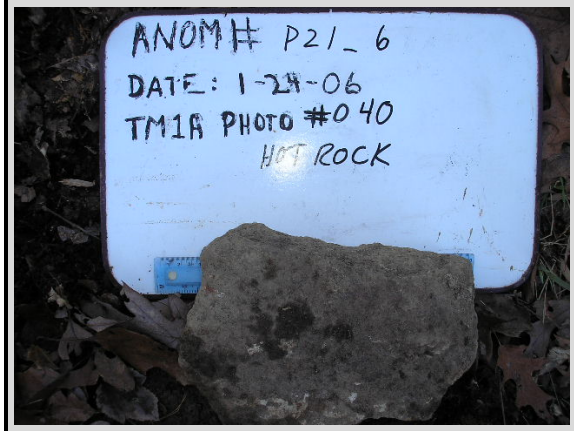
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

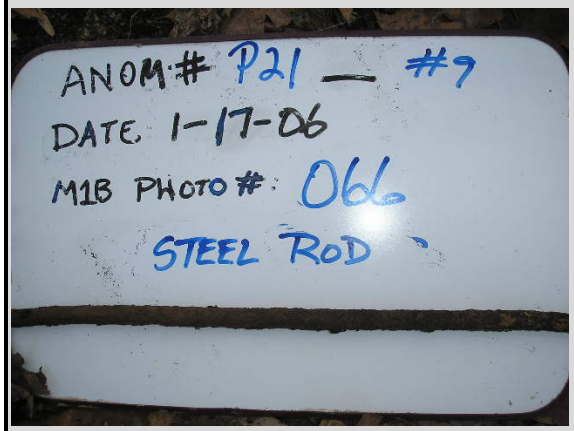
Zapata Engineering

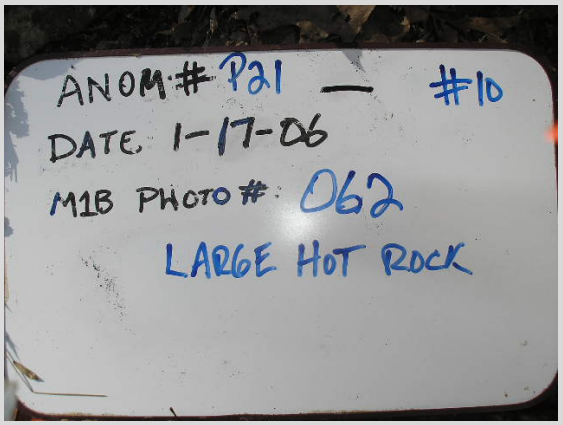
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid P-21
Camp Croft, South Carolina

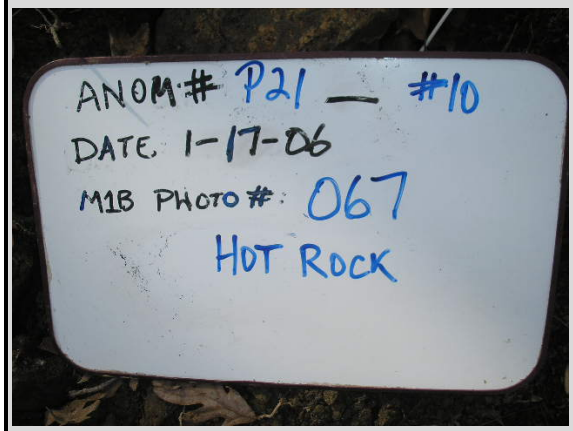
Date(s) of Survey: December 1, 2004

GRID P21 DIG PHOTOS

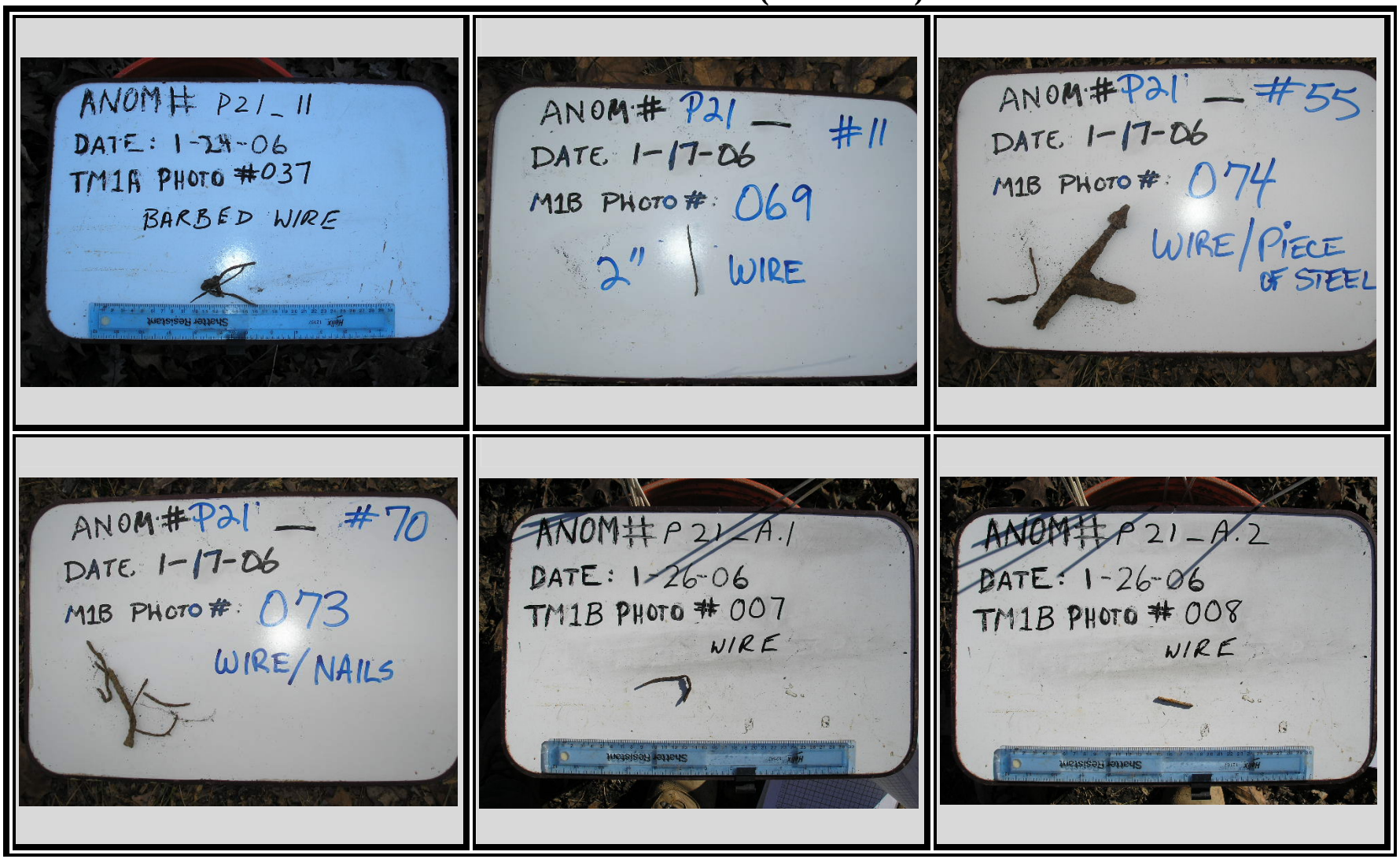






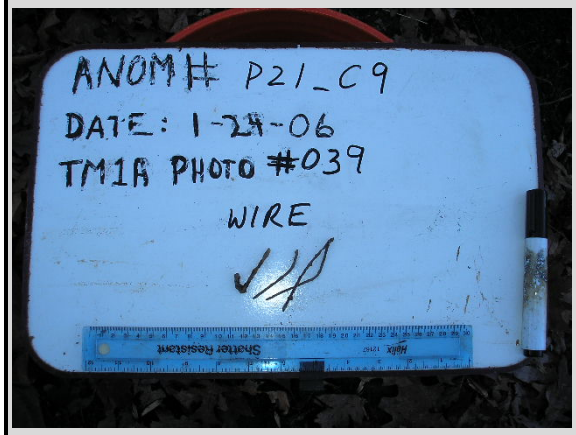


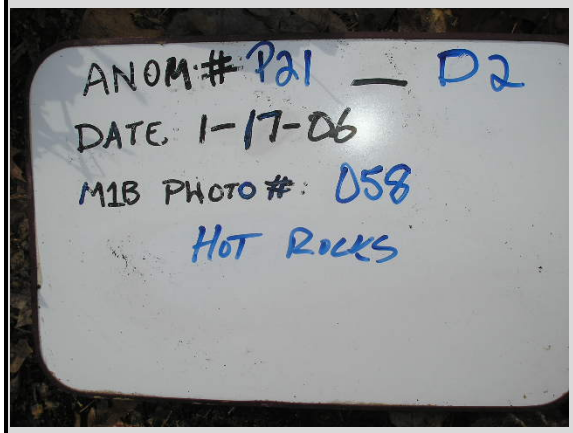
GRID P21 DIG PHOTOS (CONTINUED)

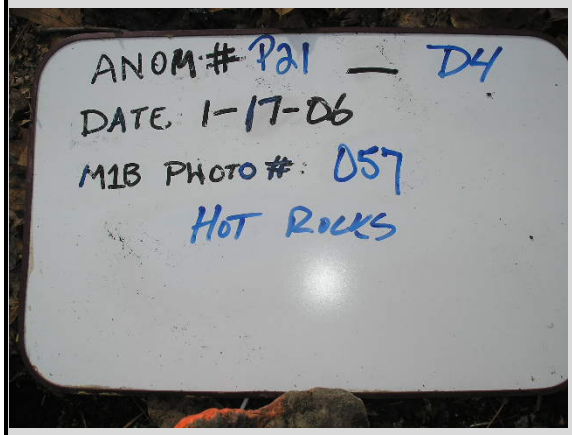


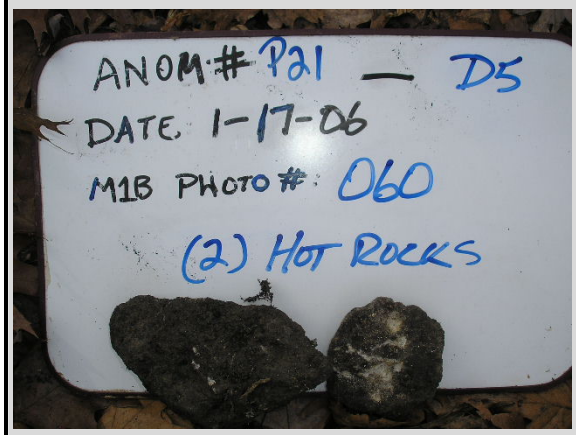
GRID P21 DIG PHOTOS (CONTINUED)

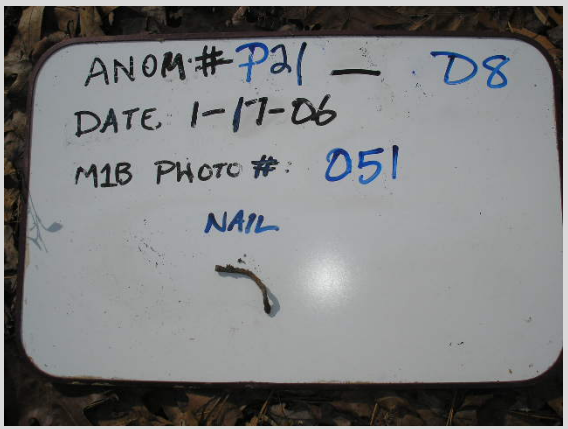
GRID P21 DIG PHOTOS (CONTINUED)



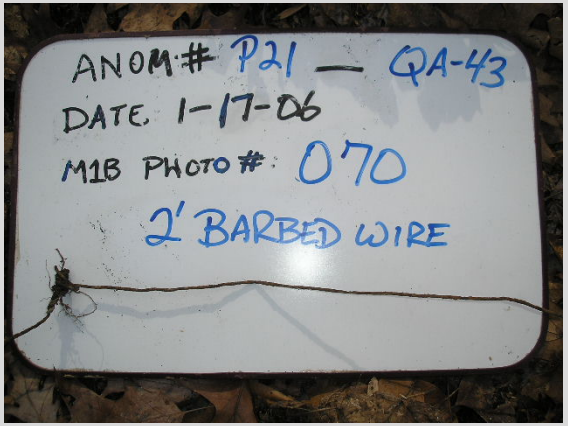








GRID P21 DIG PHOTOS (CONTINUED)



ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

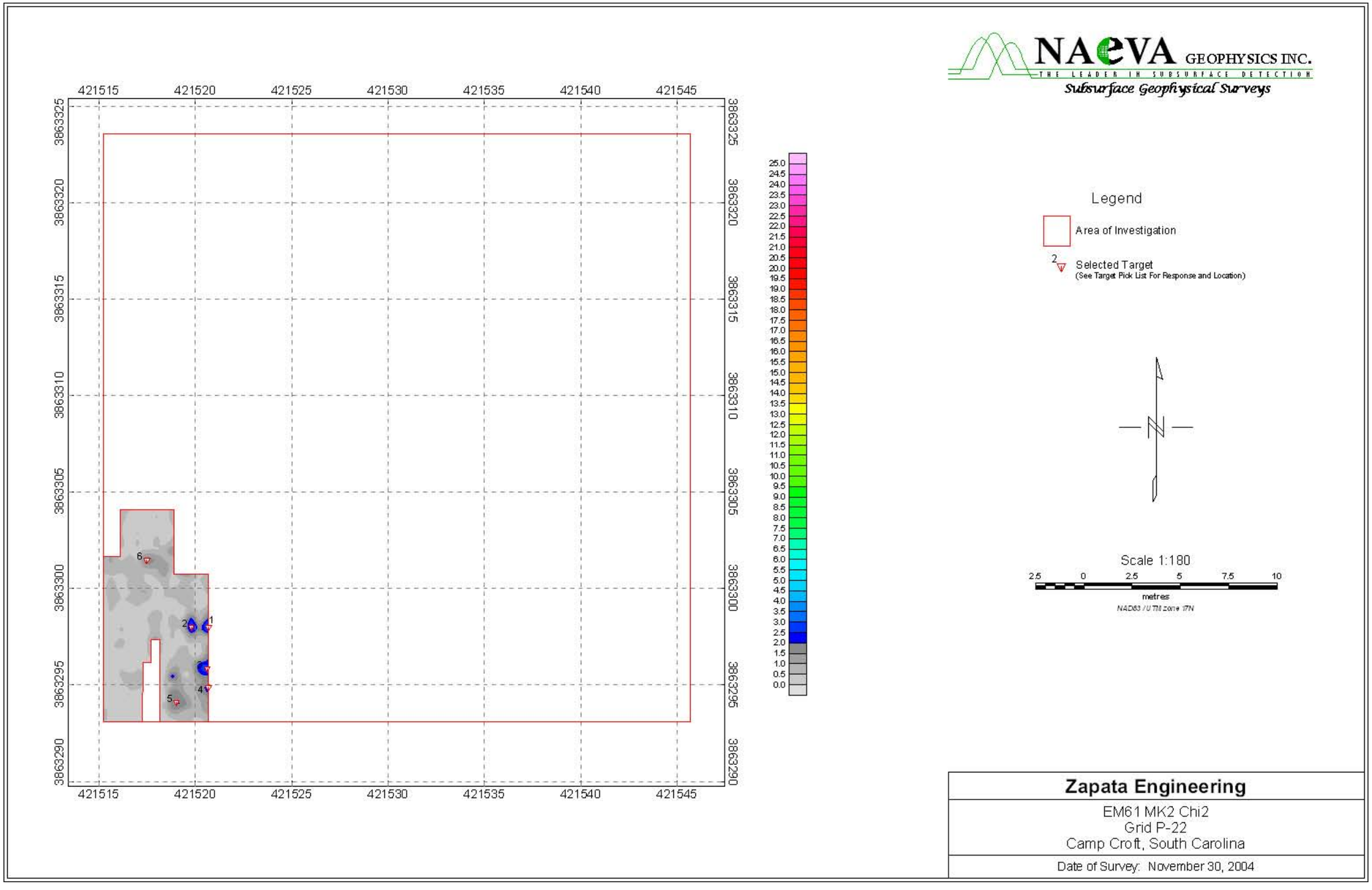
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: P22
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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				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)	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
P-22_1	421520.693	3863295.831	18	8.97	71.0		P-22_C3	11/30/04	125		0	0	01/09/05	CD	1	10	Wire	0	-12			6	6		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
P-22_2	421520.6928	3863294.856	18	5.77	70.0		P-22_C4	11/30/04	115		0	12	01/09/05	CD	1	4	Nails	0	12			6	6		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
P-22_3	421520.6936	3863297.973	18	16	41.0		P-22_C1	11/30/04	97		0	0	01/09/05	CD	1	2 x 6	Hinge	-12	0			4	6		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
P-22_5	421519.093	3863294.469	12.75	4.5	36.0		P-22_C5	11/30/04	5.5		0	0	01/09/05	CD	0.1	6	Nail	0	-6			2	3		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
P-22_6	421518.4076	3863295.231	10.5	7	33.0			11/30/04	2		-18	24	01/09/05	GEO	5	5 x 5	Rocks	10	0			3	3		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
P-22_7	421517.9522	3863301.173	9	26.5	7.0			11/30/04	12		6	-6	01/09/05	CD	2	3 x 3	Wire/rocks	8	0			0	3		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
P-22_8	421518.638	3863302.011	11.25	29.25	4.0			11/30/04	5		0	-6	01/09/05	GEO	5	4 x 4	Rock	12	0			3	5		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
P-22_9	421517.4948	3863299.802	7.5	22	3.0			11/30/04	0.5		6	-18	01/09/05	CD	0.5	10	Wire	6	0			2	2		01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06
P-22_C6	421517.4952	3863301.478	7.5	27.5		2		11/30/04			0	0		CD	.1	2 x .1 x .1	3 piec3s wire, Rusted	0	0					NO PHOTO	1/30/06	sfr	YES	TF	01/26/06	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)


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
421515
421520
421525
421530
421535
421540
421545
3863325
3863320
3863315
3863310
3863305
3863300
3863295
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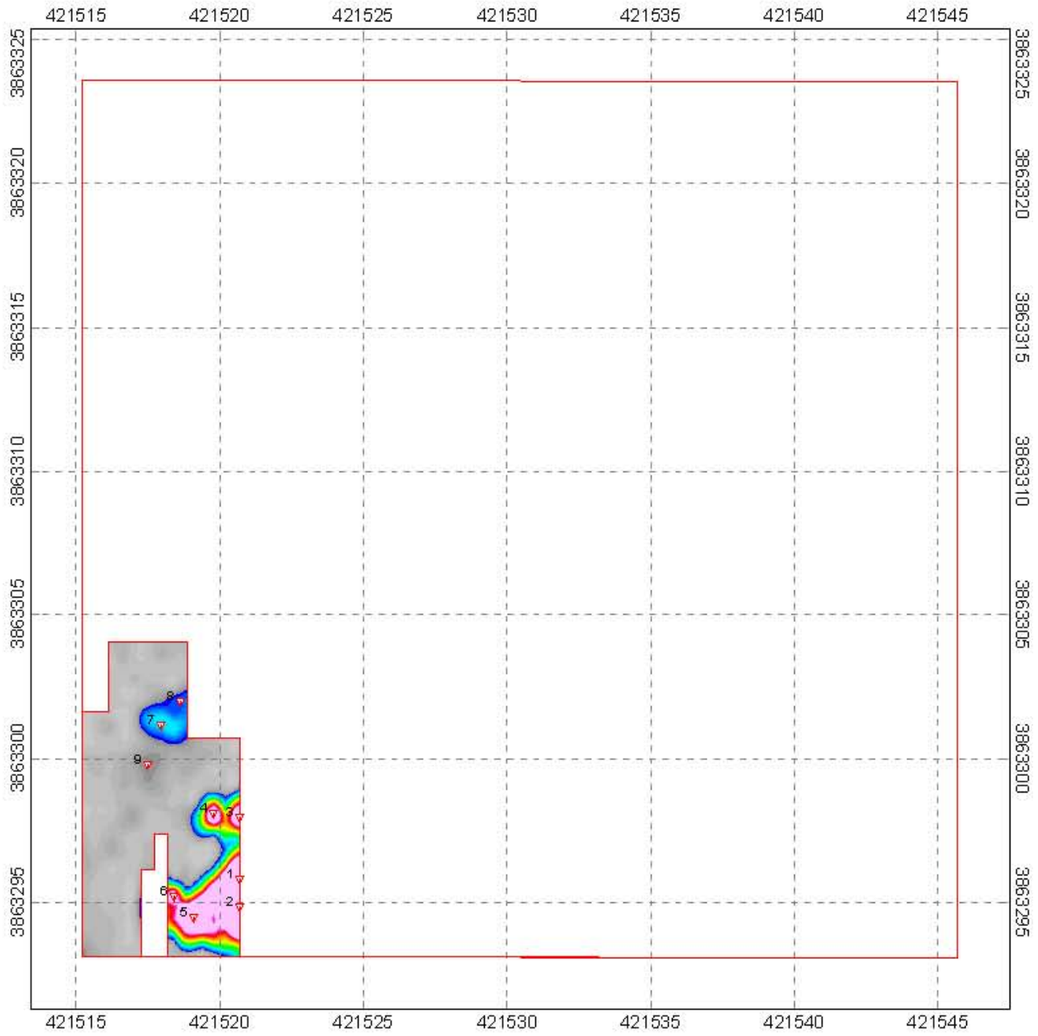
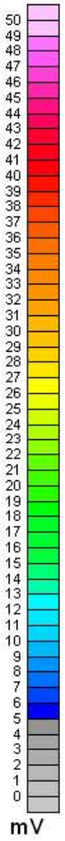
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Scale 1:180
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 Chi2
Grid P-22
Camp Croft, South Carolina
Date of Survey: November 30, 2004





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)

Scale 1:180

2.5 0 2.5 5 7.5 10

metres

NAD83 / UTM zone 17N

Zapata Engineering

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

Date of Survey: November 30, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

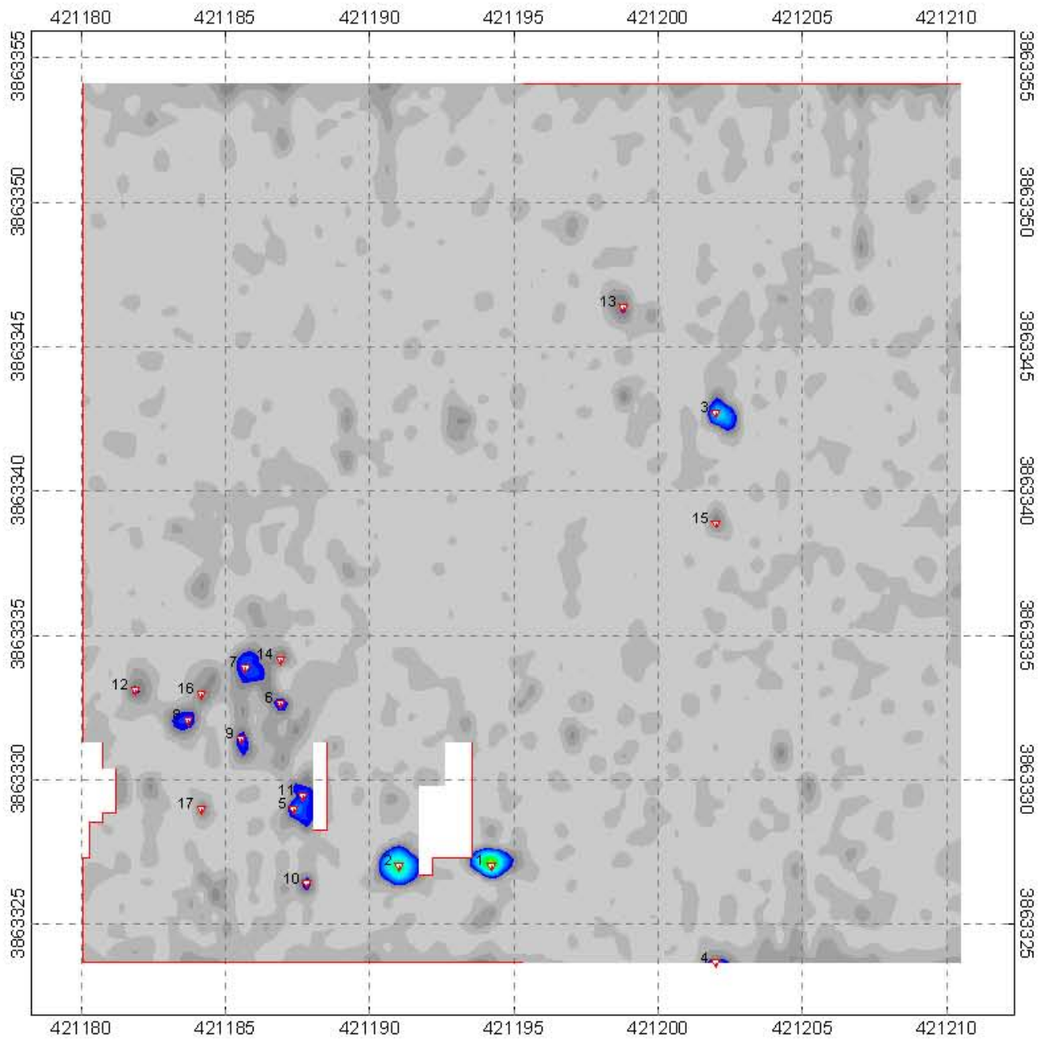
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: R11
Field Book ID:

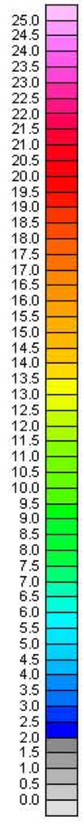
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
R-11_1	421202.1491	3863342.543	72.5	62	31.0		R-11_C3	11/25/04	70		-6	0	01/12/05	CD			Survey nail								01/13/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005
R-11_11								11/25/04	18		0	0	01/12/05	QC	0.25		QC Nail						1		01/13/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005
R-11_14	421185.9979	3863333.407	19.5	32	13.0			11/25/04	12		0	0	01/12/05	GEO			Rock, very small in dirt - mulch pile						2		01/13/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
R-11_16	421186.9118	3863332.492	22.5	29	12.0		R-11_C6	11/25/04	4		0	0	01/12/05	CD	0.25	2	Wire - mulch pile						1		01/13/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
R-11_17	421203.8214	3863329.269	78	18.5	8.0			11/25/04	12		-12	-6	01/12/05	CD	0.25	5	Nail						3		01/13/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
R-11_19	421187.3679	3863329.141	24	18	11.0			11/25/04	22		-12	-18	01/12/05	CD	0.5	2 x 5	Metal						4		01/13/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
R-11_25	421184.1696	3863332.798	13.5	30	7.0		R-11_C16	11/25/04	9		-6	12	01/12/05	CD	0.25	7	Wire						2		01/13/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005
R-11_29	421199.2525	3863335.079	63	37.5	7.0			11/25/04	3		0	6	01/12/05	GEO			Rock, very small						2		01/13/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
R-11_41	421205.9571	3863339.8	85	53	5.0			11/25/04	8		12	12	01/12/05	CD	0.25		3/8 x 2 bolt	12.729844	12.729844				2		01/13/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005
R-11_8	421206.8678	3863327.307	88	12	15.0			11/25/04	15		-12	3	01/12/05	CD	0.5	0.25	Horseshoe						8		01/13/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005

* 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)

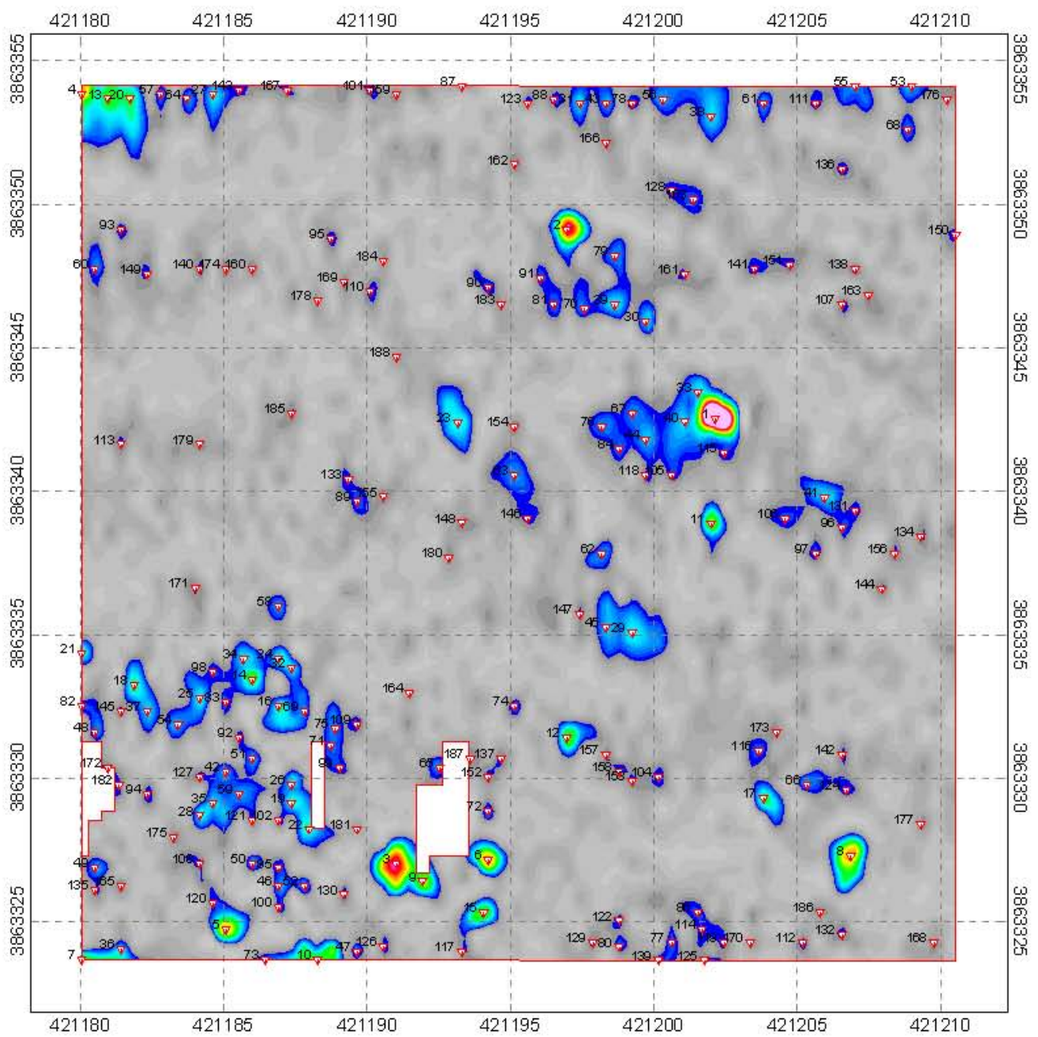
Scale 1:180

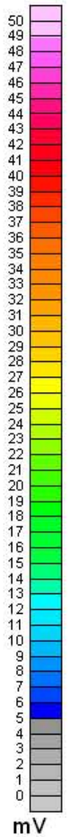
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid R-11
Camp Croft, South Carolina

Date of Survey: November 25, 2004





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)

Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid R-11
Camp Croft, South Carolina

Date of Survey: November 25, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

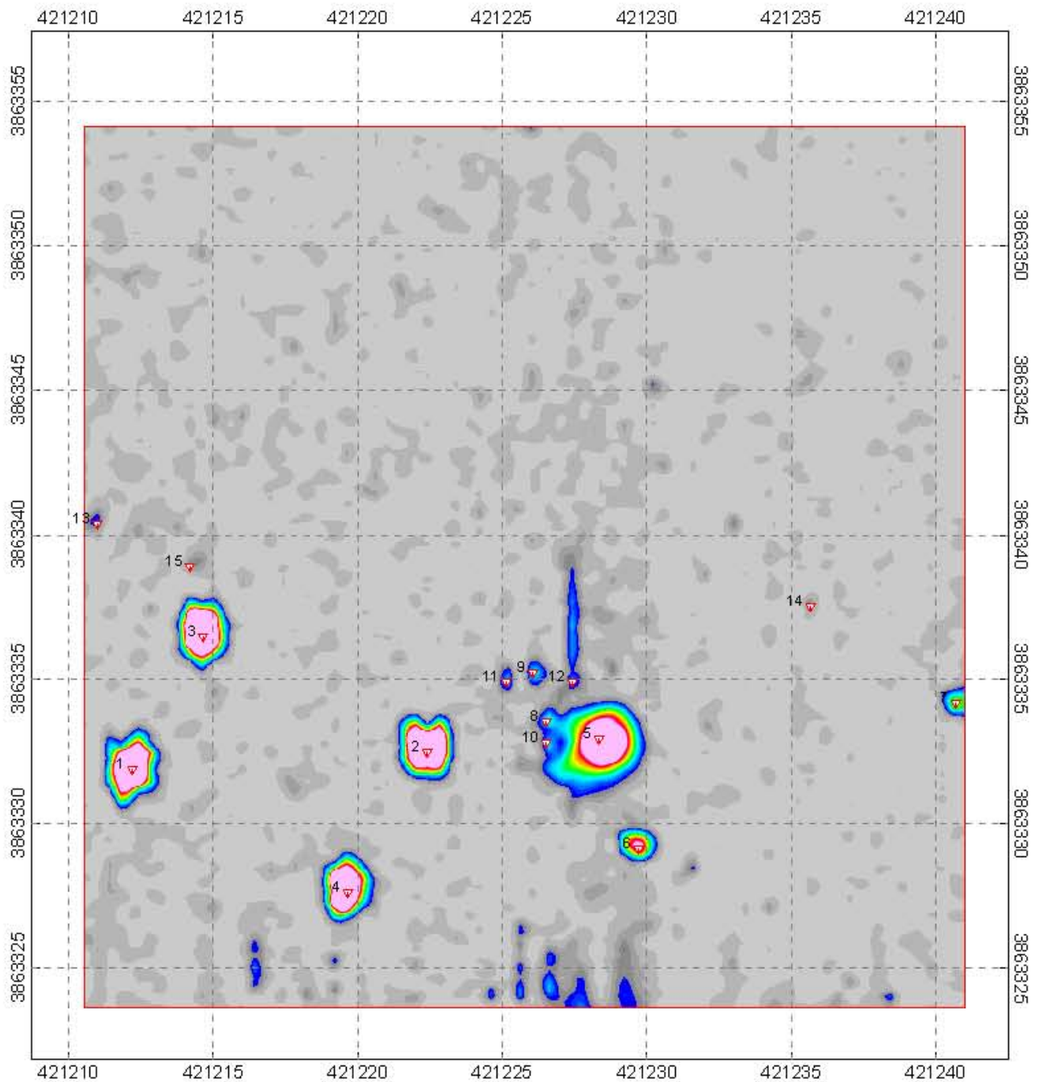
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: R12
Field Book ID:

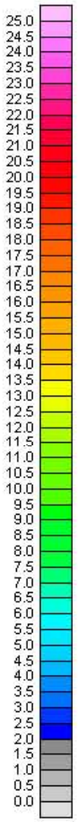
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	Chi^2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs)	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
R-12_10	421240.6905	3863334.154	99	34.5	48.0		R-12_C7	11/21/04	99		0	12	01/05/05	CD	0.25	8	Wire	-16.97313	-16.97313				2		01/13/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005
R-12_11	421226.2179	3863335.224	51.5	38	28.0		R-12_C9	11/21/04	56		-12	0	01/05/05	CD	0.25	0.25 x 18	Rod	0	0						01/13/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005
R-12_12	421225.1514	3863335.072	48	37.5	27.0		R-12_C11	11/21/04	40		0	0	01/05/05	CD	0.25	3 x 2.5	Can	12	0						01/13/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005
R-12_13	421227.5888	3863334.462	56	35.5	25.0		R-12_C12	11/21/04	40		-9.6	0	01/05/05	CD	0.25	1 x 12 x 0.125	Strap						9		01/13/05	RLF	Yes	HEL	01/19/05	YES	DRA	02/21/06
R-12_14	421234.2892	3863323.796	78	0.5	19.0			11/21/04	33		6	-6	01/05/05	CD	0.25		Metal screw						1		01/13/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
R-12_16	421240.6888	3863327.603	99	13	13.0			11/21/04	24		6	6	01/05/05	CD			Very small metal	0	-24				4		01/13/05	RLF	Yes	HEL	01/19/05	YES	DRA	02/21/06
R-12_20	421233.8347	3863333.242	76.5	31.5	13.0			11/21/04	15		0	6		CD			Very small	0	-12				1		01/13/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005
R-12_21	421240.387	3863338.572	98	49	12.0			11/21/04	8		0	12	01/05/05	CD			Very small	0	-24				4		01/13/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
R-12_22	421234.4496	3863353.808	78.5	99	11.5			11/21/04			12	0	01/05/05	CD	0.5	4 x 0.25	Horseshoe	0	12				5		01/13/05	RLF	Yes	HEL	01/13/05	YES	DRA	02/21/06
R-12_23	421235.0528	3863330.651	80.5	23	9.0			11/21/04	9		-33.6	0	01/05/05	CD			Very small	-3	0				1		01/13/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
R-12_27	421240.5388	3863336.439	98.5	42	9.0			11/21/04	4		-18	0	01/05/05	CD			Very small						5		01/13/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
R-12_28	421239.9279	3863330.955	96.5	24	8.0			11/21/04	21		6	0	01/05/05	NC											01/13/05	RLF	Yes	HEL	01/19/05	NA	DRA	3/5/2005
R-12_29	421237.7962	3863335.221	89.5	38	9.0			11/21/04	17		0	0	01/05/05	CD			Very small	0	-30				4		01/13/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
R-12_32	421227.8943	3863337.509	57	45.5	5.0			11/21/04	15		0	0	01/05/05	CD			Very small	-8.486563	8.4865629				1		01/13/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
R-12_39	421229.2678	3863346.192	61.5	74	9.0			11/21/04	15		-12	0	01/05/05	CD	0.25	0.375 x 1.5	Bolt	0	24				1		01/13/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
R-12_40	421240.8462	3863346.494	99.5	75	8.0			11/21/04	11		0	0	01/05/05	CD			Very small						4		01/13/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005
R-12_41	421237.7954	3863332.174	89.5	28	6.0			11/21/04	20		12	12	01/05/05	GEO			Hot dirt	-8.486563	-8.486563				6		01/13/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
R-12_46	421232.0065	3863333.09	70.5	31	8.0			11/21/04	8		0	0	01/05/05	CD	0.25	2	Wire	0	12				1		01/13/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
R-12_53	421229.7254	3863348.325	63	81	6.0			11/21/04	7		0	0	01/05/05	CD			Very small						2		01/13/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
R-12_54	421225.1522	3863337.967	48	47	7.0			11/21/04	10		13.2	13.2	01/05/05	CD			Very small	8.4865629	-8.486563				1		01/13/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
R-12_55	421229.7199	3863327.758	63	13.5	6.0			11/21/04	10		0	0	01/05/05	MD	0.25		Pull ring	0	6				3		01/13/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005
R-12_C10	421226.5219	3863332.787	52.5	30		6	R-12_7 ****	11/21/04			7.2	0	01/05/05	CD	.5	10 x .25 x .25	multiple pieces of metal, Badly Rusted	0	0	NA	0	6	7	R12_C10 - #022	1/18/06	bam	NA	DRA	02/22/06	YES	RVW	
R-12_C6	421229.7202	3863329.129	63	18		33	R-12_6 ****	11/21/04			0	12	01/05/05	CD	.25	4 x 4 x .25	tin lid, Rusted	0	0	NA	15	4	4	R12_C6 - #018	1/18/06	bam	YES	TF	01/26/06	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)
**** Reacquisition values from reacquisition of associate target





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)

Scale 1:180

2.5 0 2.5 5 7.5 10

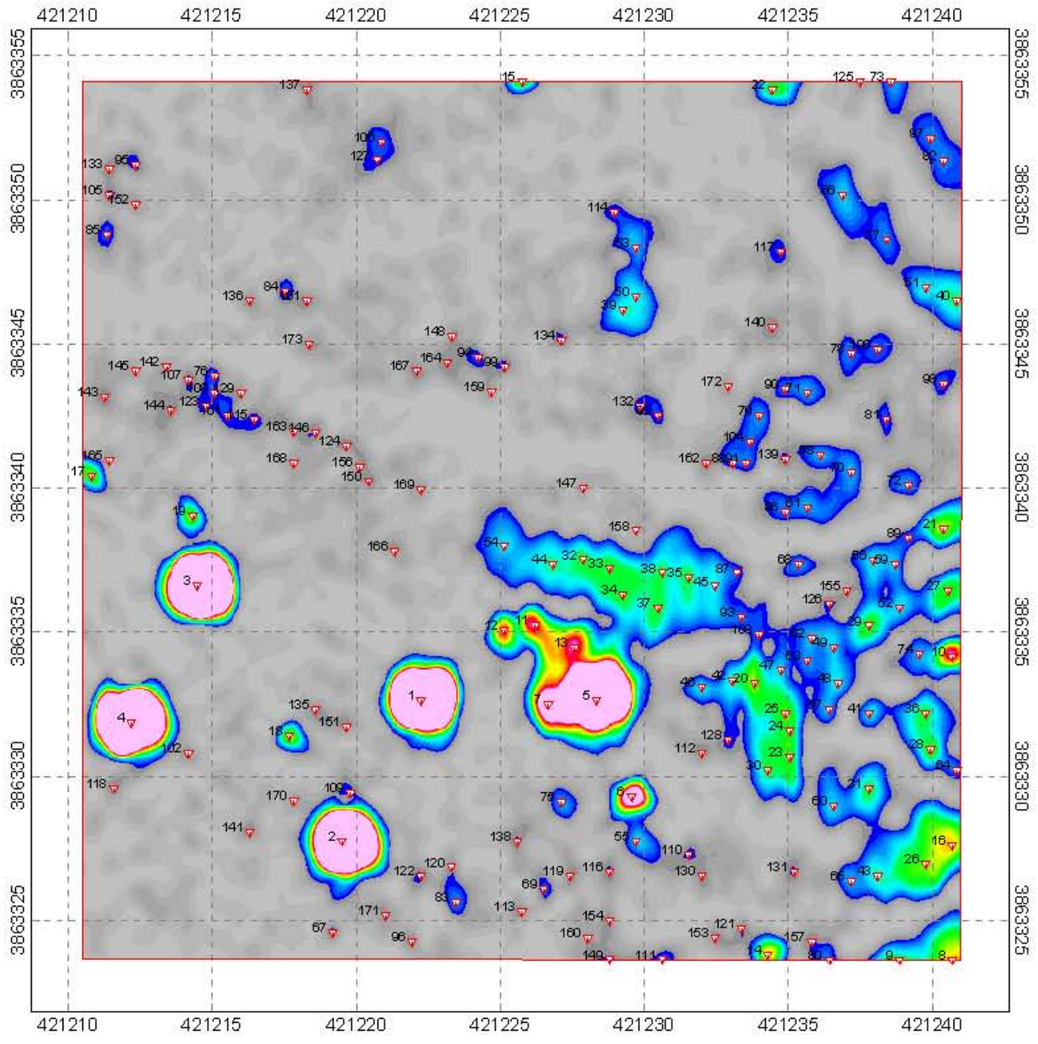
metres

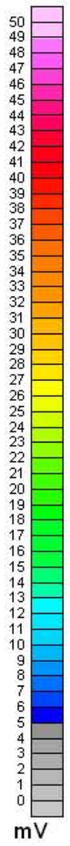
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid R-12
Camp Croft, South Carolina

Date of Survey: November 23, 2004





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)

Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid R-12
Camp Croft, South Carolina

Date of Survey: November 23, 2004

GRID R12 DIG PHOTOS

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: R-13
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
R-13_100	421258.3679	3863353.497	57	98	15.0			11/23/04	14		-2.4	-12	01/06/05	CD	0.25	12 x 1	1" banding - Also 166					3	5		01/13/05	RLF	Yes	HEL	01/19/05	YES	DRA	3/5/2005
R-13_103	421250.1386	3863343.749	30	66	12.0			11/23/04			12	6	01/05/05	CD		2	Nail	-12	0			3	3		01/17/05	RLF	Yes	HEL	01/19/05	YES	DRA	3/5/2005
R-13_108	421242.3707	3863350.302	4.5	87.5	13.0			11/23/04			0	6	01/05/05	GEO			Rock	-8.486563	-8.486563			3	3		01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_114	421256.5317	3863323.637	51	0	11.0			11/23/04	10		0	0	01/06/05	CD		3	Nail	0	-36			2	3		01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_115	421255.7773	3863350.603	48.5	88.5	13.0			11/23/04	12		-6	12	01/06/05	MD	0.25	0.25 x 0.5	Frag	25.459689	-25.45969			2	2		01/13/05	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_13	421249.6769	3863326.534	28.5	9.5	46.0		R-13_C13	11/23/04	29		0	0	01/07/05	MD	0.25	2	M34 top					2	4		01/17/05	RLF	Yes	HEL	01/19/05	YES	DRA	3/5/2005
R-13_14	421268.4224	3863351.971	90	93	44.0		R-13_C16	11/23/04	44		-6	-6	01/06/05	CD	0.25	10	Nail	-12	0			1	2		01/13/05	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_148	421259.738	3863349.688	61.5	85.5	10.0			11/23/04			-6	-12	01/06/05	CD	0.25	10	Wire						3		01/13/05	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_152	421246.632	3863334.152	18.5	34.5	11.0			11/23/04			0	0		CD	0.25	0.25 x 1	Metal	-18	0			2	2		01/17/05	RLF	Yes	HEL	01/19/05	YES	DRA	3/5/2005
R-13_161	421257.4522	3863347.403	54	78	8.0			11/23/04	7.7		12	-6	01/06/05	GEO		0.5 x 0.5	Rock	0	-30				3		01/13/05	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_178	421250.9031	3863354.108	32.5	100	7.0			11/23/04			0	0	01/05/05	GEO			Small rock	-6	0			2	2		01/17/05	RLF	Yes	HEL	01/19/05	YES	DRA	3/5/2005
R-13_18	421258.8191	3863331.864	58.5	27	31.0			11/23/04	31		0	-6	01/06/05	GEO			3 hot rocks	0	18			2	2		01/17/05	RLF	Yes	HEL	01/19/05	YES	DRA	3/5/2005
R-13_183	421261.5635	3863339.785	67.5	53	12.0			11/23/04	11		-12	-6	01/06/05	CD		5	Nail	-18	0			3	3		01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_19	421249.6765	3863325.011	28.5	4.5	30.0		R-13_C15	11/23/04	20		0	0	01/07/05	CD		2	Nail					1	1		01/17/05	RLF	Yes	HEL	01/19/05	YES	DRA	3/5/2005
R-13_198	421259.4309	3863340.852	60.5	56.5	10.0			11/23/04	10		0	0	01/06/05	NC											01/17/05	RLF	Yes	HEL	01/2005	NA	DRA	3/5/2005
R-13_2	421253.7895	3863323.943	42	1	296.0		R-13_C4	11/23/04	296		0	0	01/06/05	CD		2 x 1	1" banding	-18	0			1	1		01/17/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005
R-13_202	421253.3387	3863346.795	40.5	76	11.0			11/23/04	9		-6	0	01/06/05	CD			Very small	0	-24			1	1		01/17/05	RLF	Yes	HEL	01/19/05	YES	ALJ	3/5/2005
R-13_21	421240.9952	3863334.154	0	34.5	38.0		R-13_C6	11/23/04			12	-6	01/05/05	CD		2	Nail/hot dirt	0	12			2	2		01/17/05	RLF	Yes	HEL	01/19/05	YES	DRA	3/5/2005
R-13_215	421258.0603	3863342.68	56	62.5	6.0			11/23/04	6		0	0	01/07/05	GEO			Small rock	24	0			3	3		01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_23	421253.945	3863335.521	42.5	39	34.0			11/23/04	28		-18	0	01/06/05	GEO			Rock	8.4865629	8.4865629			1	2		01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_24	421256.5339	3863331.825	51	26.87	25.0			11/23/04	25		0	0	01/06/05	NC											01/17/05	RLF	Yes	HEL	01/2005	NA	DRA	3/5/2005
R-13_25	421245.1059	3863324.25	13.5	2	22.0			11/23/04			-6	0	01/05/05	CD		1	Nail	0	18			2	2		01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_28	421265.3705	3863333.842	80	33.5	28.0			11/23/04	28		-6	-6	01/06/05	NC											01/17/05	RLF	Yes	HEL	01/2005	NA	DRA	3/5/2005
R-13_38	421251.508	3863337.503	34.5	45.5	19.0			11/23/04	18		0	0	01/06/05	NC											01/17/05	RLF	Yes	HEL	01/2005	NA	DRA	3/5/2005
R-13_4	421241.4537	3863339.333	1.5	51.5	110.0		R-13_C5	11/23/04			-6	12	01/05/05	CD	0.25	6	Nail					1	3		01/17/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005
R-13_42	421271.4667	3863342.22	100	61	16.0		R-13_C25	11/23/04	15		-6	-6	01/06/05	CD	0.5	1 x 6 x 0.25	Bar	-24	0			2	3		01/13/05	RLF	Yes	HEL	01/19/05	YES	DRA	3/5/2005
R-13_51	421262.6333	3863352.125	71	93.5	17.0			11/23/04	13		6	8.4	01/06/05	GEO			Hot dirt	30	0			4	8		01/13/05	RLF	Yes	HEL	01/19/05	YES	DRA	3/5/2005
R-13_55	421247.3925	3863329.277	21	18.5	15.0			11/23/04			0	12	01/05/05	CD			Very small					1	1		01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_57	421251.5074	3863335.37	34.5	38.5	19.0			11/23/04	19		0	0	01/06/05	GEO			Hot dirt	24	0			10	10		01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_6	421265.2177	3863332.166	79.5	28	91.0		R-13_C9	11/23/04	20		0	12	01/06/05	CD			Survey nail	-30	0						01/17/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-13_67	421264.7665	3863353.343	78	97.5	17.0			11/23/04	17		0	-15.6	01/06/05	GEO			Hot dirt					4	8		01/13/05	RLF	Yes	HEL	01/19/05	YES	DRA	3/5/2005
R-13_68	421269.3323	3863336.736	93	43	23.0			11/23/04	22		0	0	01/06/05	GEO		1 x 1	Rock					3	3		01/17/05	RLF	Yes	HEL	01/19/05	YES	DRA	3/5/2005
R-13_75	421269.4858	3863341.001	93.5	57	13.0			11/23/04	13		-12	0	01/06/05	CD	0.25	6	Handle	0	6			2	2		01/13/05	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_76	421253.1873	3863350.299	40	87.5	16.0			11/23/04			0	0	01/05/05	CD	0.25	0.125 x 12	Wire	0	6			2	3		01/13/05	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_79	421245.1108	3863342.379	13.5	61.5	14.0			11/23/04			0	0	01/05/05	NC											01/17/05	RLF	Yes	HEL	01/19/05	NA	DRA	3/5/2005
R-13_8	421258.6683	3863337.653	58	46	67.0		R-13_C11	11/23/04	90		0	6	01/06/05	CD	0		Survey nail					1			01/17/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-13_80	421254.7106	3863349.537	45	85	13.0			11/23/04	13		0	0	01/06/05	CD			Very small	30	0				3		01/13/05	RLF	Yes	HEL	01/19/05	YES	DRA	3/5/2005
R-13_88	421251.9634	3863331.256	36	25	16.0			11/23/04			0	-24	01/05/05	GEO			Hot dirt					12			01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_94	421246.0214	3863329.43	16.5	19	14.0			11/23/04			0	12	01/05/05	CD	0.25	1 x 2	Metal	16.973126	16.973126			2	2		01/17/05	RLF	Yes	HEL	01/19/05	YES	DRA	3/5/2005
R-13_96	421253.3371	3863341.006	40.5	57	14.0			11/23/04	10		-6	12	01/06/05	CD	0.25	5	Nail	0	12			1	3		01/13/05	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

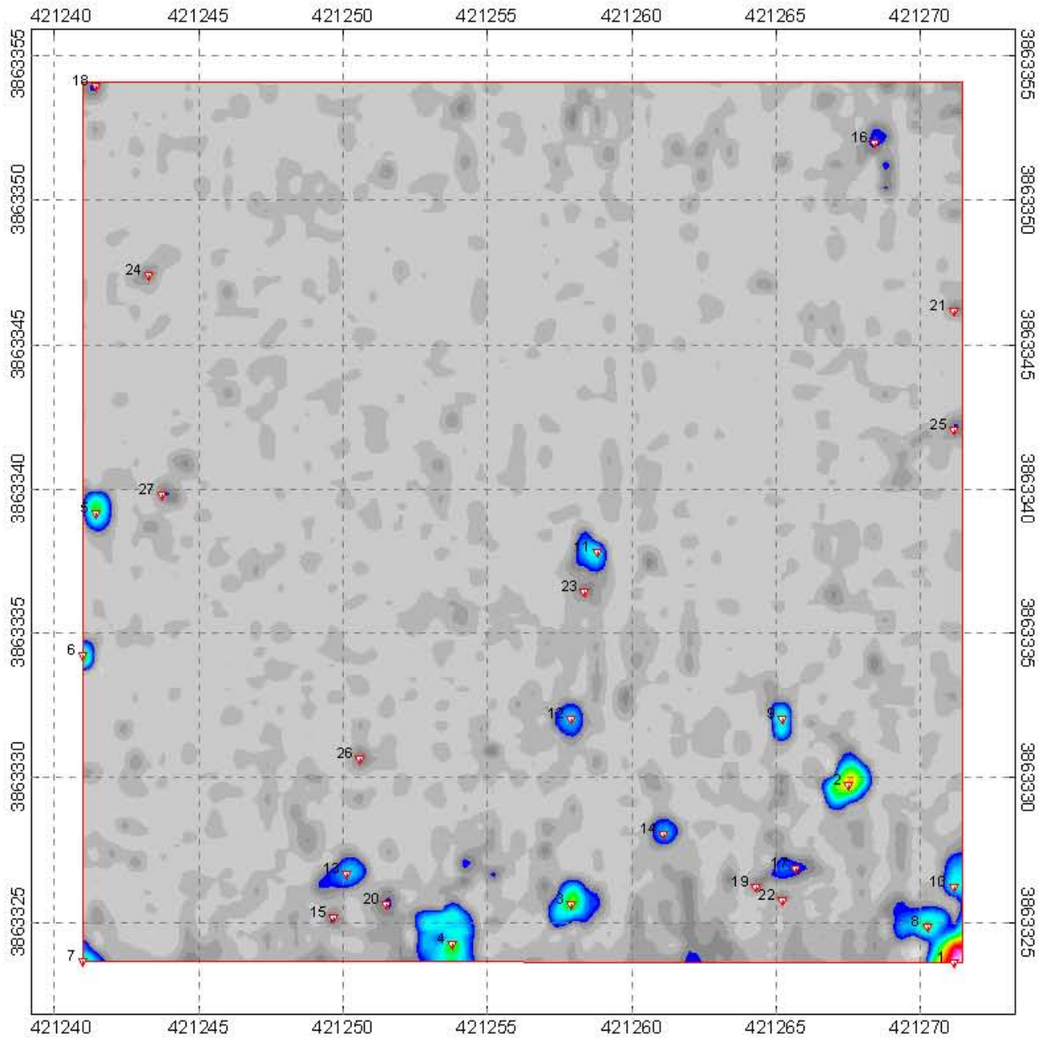
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: R13
Field Book ID:

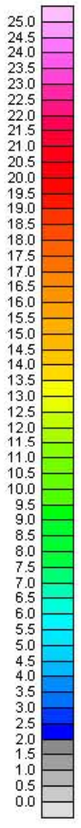
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
R-13_98	421267.9615	3863337.955	88.5	47	16.0			11/23/04	16		0	0	01/05/05	CD		3	Nail	0	-18			2	3		01/17/05	RLF	Yes	HEL	01/19/05	YES	DRA	3/5/2005
R-13_C23	421258.3633	3863336.434	57	42		2		11/23/04			0	0		CD	1	14 x 2 x .25	metal band, Rusted	0	0	N	30	11	14	R13_C23 - #019	1/18/06	bam	NA	DRA	02/22/06	YES	RVW	
R-13_C26	421250.5921	3863330.647	31.5	23		2	R-13_83	11/23/04			0	0		CD	.25	2.5 x 2 x .25	metal hasp, Rusted	0	0	NA	0	2	2	E13_C26 - #017	1/18/06	bam	YES	TF	01/26/06	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)





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)

Scale 1:180

2.5 0 2.5 5 7.5 10

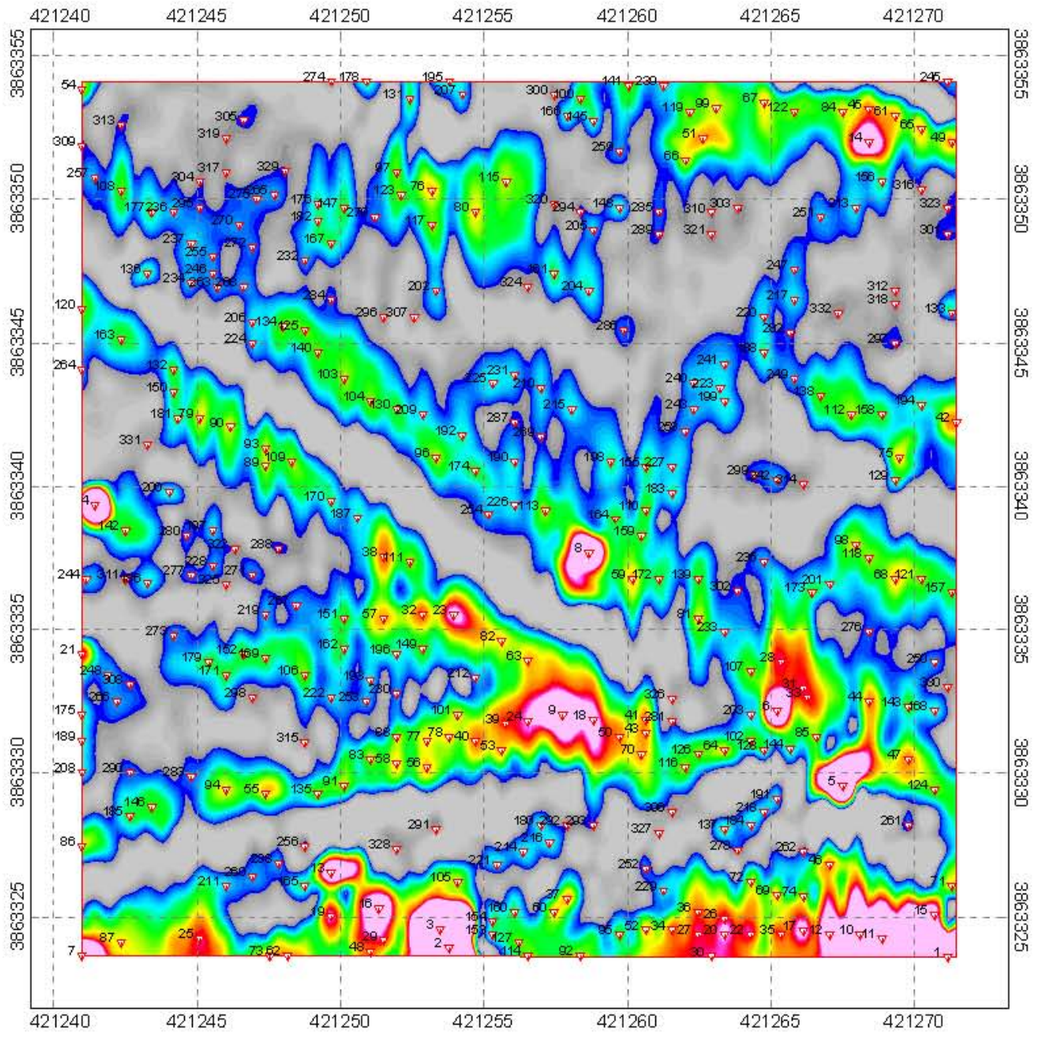
metres

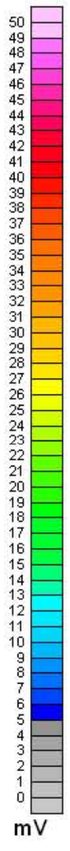
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid R-13
Camp Croft, South Carolina

Date of Survey: November 23, 2004





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)

Scale 1:180

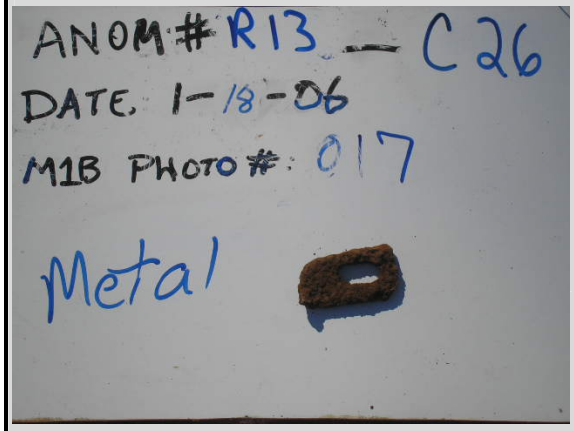
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid R-13
Camp Croft, South Carolina

Date of Survey: November 23, 2004

GRID R13 DIG PHOTOS



ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: R14
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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				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)	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
R-14_10	421282.4357	3863342.674	36	62.5	64.0		R-14_C5	11/22/04	103		-6	0	01/07/05	GEO			Large rock - 2 x 2 hole					12			01/18/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_105	421281.8254	3863339.17	34	51	9.0			11/22/04	5		6	0	01/07/05	GEO			Hot dirt - 1 x 1 x 1 hole					12			01/18/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_107	421291.5732	3863330.331	66	22	12.0			11/22/04	10		0	0	01/07/05	CD	0.25	3 x 0.2	3/8" bolt	-12	0			1	2.5		01/17/05	RLF	Yes	HEL	01/2005	YES	ALJ	3/5/2005
R-14_117	421285.9358	3863328.504	47.5	16	11.0		R-14_C30	11/22/04	14		-6	0	01/07/05	CD	0.25	1 x 2 x 0.625	Metal	12	0			2	3		01/17/05	RLF	Yes	HEL	01/2005	YES	ALJ	3/5/2005
R-14_124	421293.3462	3863347.368	71.8039	77.9171	9.0			11/22/04	11		0	-8.4	01/07/05	CD			Very small					2	2		01/17/05	RLF	Yes	HEL	01/2005	YES	ALJ	3/5/2005
R-14_131	421299.3327	3863346.919	91.4522	76.4482	7.0			11/22/04	10		0	0	01/08/05	CD		2	Wire	0	12			2	2		01/17/05	RLF	Yes	HEL	01/2005	YES	ALJ	3/5/2005
R-14_140	421284.263	3863339.322	42	51.5	8.0		R-14_C21	11/22/04	5		12	12	01/07/05	GEO			Rock	0	12			2	2		01/18/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_16	421300.1078	3863342.364	94	61.5	27.0		R-14_C31	11/22/04	35		0	0	01/07/05	CD		5	Nail with skirt					1	3		01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_160	421284.5667	3863335.97	43	40.5	7.0			11/22/04	8		0	0	01/07/05	CD		0.625	4 nails/1 bolt	0	24			3	3		01/17/05	RLF	Yes	HEL	01/2005	YES	ALJ	3/5/2005
R-14_18	421296.4493	3863334.291	82	35	28.0		R-14_C26	11/22/04	30		0	0	01/07/05	MD	0.8	2	M15 grenade top					1	2		01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_184	421275.884	3863339.629	14.5	52.5	7.0			11/22/04	6		0	0	01/07/05	GEO			Rock	12	0			1	1		01/18/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_19	421301.6905	3863345.316	99.1917	71.1893	26.0			11/22/04	33		-6	6	01/07/05	CD	0.25	0.25 x 0.25 x 4	Metal pin					0	1		01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_23	421280.305	3863350.444	29	88	22.0			11/22/04	35		12	0	01/07/05	CD		0.25 x 0.5	Metal/hot dirt	0	12			1	1		01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_26	421277.4104	3863350.597	19.5	88.5	27.0			11/22/04	24		0	0	01/07/05	GEO			Hot dirt					18			01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_3	421283.6554	3863346.025	40	73.5	425.0		R-14_C3	11/22/04	350		0	0	01/07/05	GEO			Hot dirt - 1 x 1 x 1 hole					12			01/18/05	RLF	Yes	HEL	01/2005	YES	ALJ	3/5/2005
R-14_33	421278.3244	3863350.292	22.5	87.5	25.0			11/22/04	22		0	0	01/07/05	GEO			Hot dirt	-12	0			12			01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_39	421274.6683	3863351.055	10.5	90	20.0			11/22/04	4		12	0	01/07/05	GEO			Small rock	0	-18			2	2		01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_50	421286.5467	3863333.989	49.5	34	19.0			11/22/04	25		6	-24	01/07/05	CD		0.75 x 0.75	Metal	24	0			3	3		01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_51	421278.7796	3863343.284	24	64.5	18.0		R-14_C25	11/22/04	27		-6	6	01/07/05	CD	0.8	1.5 x 2	Equip part					10	11		01/18/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_6	421281.6751	3863346.635	33.5	75.5	121.5			11/22/04	165		0	0	01/07/05	CD		4 x 1	1" banding					3	3		01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_61	421281.0605	3863327.439	31.5	12.5	15.0			11/22/04	20		0	0	01/07/05	GEO		1.5 x 2	Rock	0	-24			2	3		01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_62	421287.3121	3863347.547	52	78.5	17.0			11/22/04	16		0	0	01/07/05	MD	0.8	2	M15 grenade top					5	6		01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_66	421283.8025	3863326.524	40.5	9.5	15.0			11/22/04	19		-12	0	01/07/05	CD			Rust flakes	-7	0			0	0		01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_67	421290.0547	3863348.765	61	82.5	13.0			11/22/04	6		6	-6	01/07/05	CD		4	Pin					4	4		01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_68	421297.3668	3863346.935	85	76.5	13.0			11/22/04	10		6	0	01/07/05	CD	0.25	10	Wire	24	0			4	6		01/17/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_7	421280.9127	3863344.198	31	67.5	103.0		R-14_C4	11/22/04	130		0	0	01/07/05	CD	0.25	2	Nail/nail - 1 x 1 x 1 hole on flag (nail)	-21.21641	21.216407			2	3		01/18/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_76	421277.2585	3863352.121	19	93.5	14.0			11/22/04	14		0	0	01/07/05	CD	0.25	2 x 2	Metal	8	0			5	5		01/17/05	RLF	Yes	HEL	01/2005	YES	ALJ	3/5/2005
R-14_8	421284.1111	3863341.15	41.5	57.5	75.0		R-14_C12	11/22/04	125		0	-6	01/07/05	CD			Old sprinkler head - left in ground					1	1+		01/18/05	RLF	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_80	421295.6871	3863332.615	79.5	29.5	16.0			11/22/04	5		0	-12	01/07/05	CD			Rust flake					0	0		01/17/05	RLF	Yes	HEL	01/2005	YES	ALJ	3/5/2005
R-14_95	421276.4899	3863326.831	16.5	10.5	17.0			11/22/04	27		6	0	01/07/05	GEO			Rocks	-12	0			1	1		01/17/05	RLF	Yes	HEL	01/2005	YES	ALJ	3/5/2005
R-14_C1	421287.3096	3863338.407	52	48.5		146	R-14_1	11/22/04			0	0		GEO	0.25	0.5 x 0.5	Geo rock	-4	0			2	2		01/26/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-14_C10	421283.198	3863344.578	38.5	68.75		8		11/22/04			0	0		CD	0.25	2	Finish nail					1	1		01/26/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-14_C11	421286.5512	3863350.442	49.5	88		8	R-14_74	11/22/04			0	0		CD	0.5	14 x 0.125	Weld rod	0	12			3	3		01/26/05	DRG	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_C12	421283.8826	3863340.997	40.75	57		8	R-14_8	11/22/04			0	0		CD			Sprinkler head					1	1		01/26/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-14_C13	421301.1735	3863339.774	97.5	53		7	R-14_9	11/22/04			0	0		CD	0.25	4	Wire	-6	0			5	5		01/26/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-14_C14	421295.689	3863339.623	79.5	52.5		5	R-14_13	11/22/04			0	0		CD	2	3 x 2	Bearing buddy					2	3		01/26/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-14_C15	421299.8001	3863331.091	93	24.5		4	R-15_66	11/22/04			0	0		CD	0.25	1.5 x 1	Metal	15	0			6	6		01/26/05	DRG	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_C16	421301.3246	3863335.051	98	37.5		4	R-14_159	11/22/04			0	0		CD	0.25	2	Old nail	8.4865629	8.4865629			2	2		01/26/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-14_C17	421271.4616	3863323.633	0	0		3	R-14_12	11/22/04			0	0		CD	0.25	6	R-14 SW corner nail					0	3		01/26/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-14_C18	421271.4625	3863326.832	0	10.5		3		11/22/04			0	0		CD	0.2	1.5	Finish nail	-12	0			1	1		01/26/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

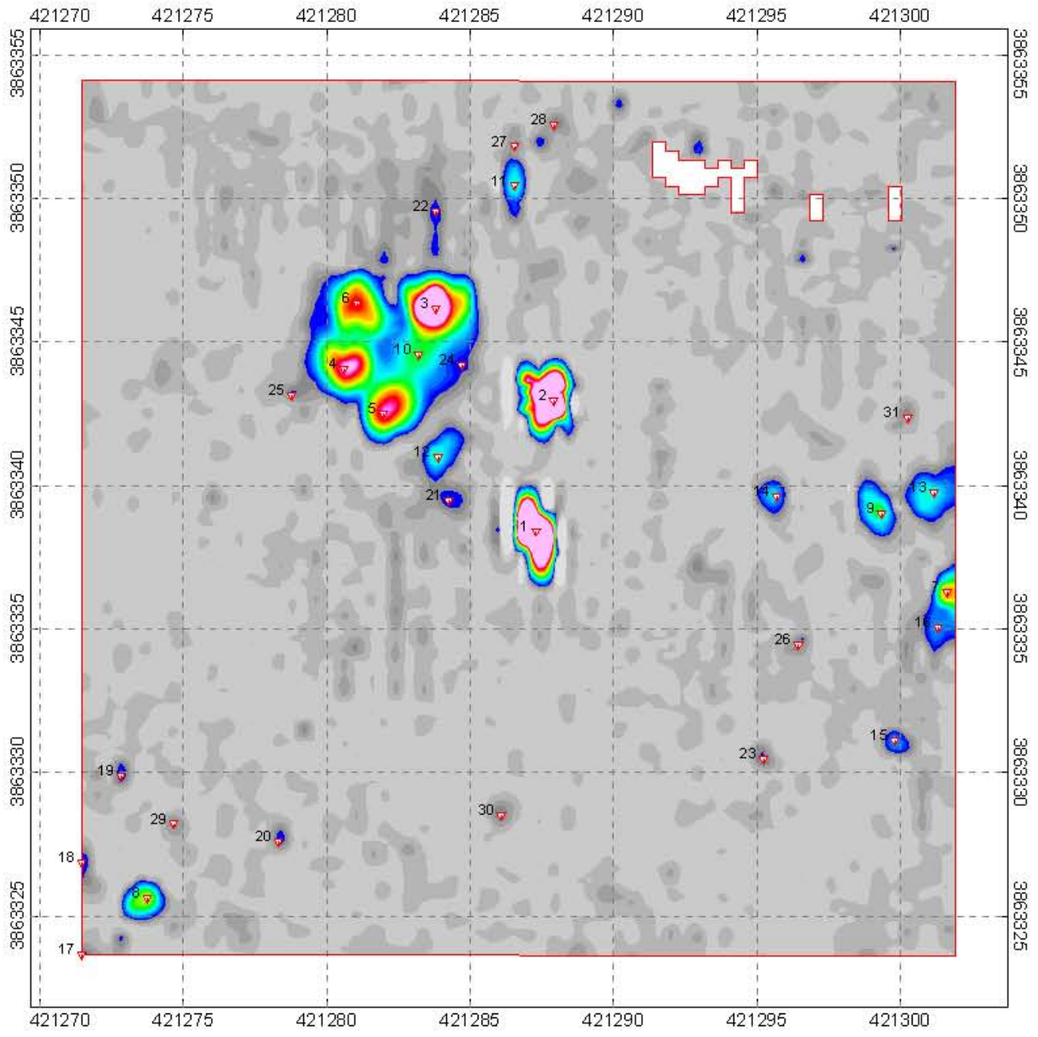
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: R14
Field Book ID:

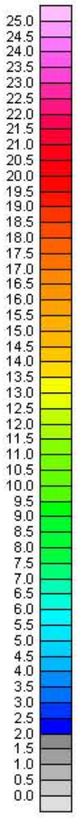
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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				Depth (in)											
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs)	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
R-14_C19	421272.8344	3863329.879	4.5	20.5		3		11/22/04			0	0		CD	0.25	3 x 0.25	Sewer line and 3" nail					0			01/26/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-14_C2	421287.9203	3863342.977	54	63.5		113	R-14_2	11/22/04			0	0		CD	0.25	2	Old nail/geo rock					10	10		01/26/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-14_C20	421278.3183	3863327.592	22.5	13		3	R-14_150	11/22/04			0	0		CD	0.5	3 x 2	Sewer line and geo rock					0			01/26/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-14_C21	421284.263	3863339.474	42	52		3	R-14_140	11/22/04			0	0		CD	0.25	2 x 0.125	Old nail	9.9009901	-9.90099			2	2		01/26/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-14_C22	421283.8087	3863349.529	40.5	85		3		11/22/04			0	0		GEO	0.25	1.25 x 1.25	Geo rock	8.4865629	-8.486563			1	1		01/26/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-14_C23	421295.2295	3863330.482	78	22.5		3	R-14_220	11/22/04			0	0		GEO	0.25	0.5 x 0.5	Geo rock	0	14			4	4		01/26/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-14_C24	421284.7213	3863344.197	43.5	67.5		2		11/22/04			0	0		CD	0.25	6	Weld rod	8.4865629	-8.486563			4	6		01/26/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-14_C6	421281.0656	3863346.33	31.5	74.5		22		11/22/04			0	0		CD	0.25	1	Bolt	0	2			2	4		01/26/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-14_C7	421301.6296	3863336.27	99	41.5		19	R-14_4	11/22/04			0	0		CD	0.25	3	Old nail	-9.90099	-9.90099			4	4		01/26/05	DRG	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_C8	421273.7473	3863325.613	7.5	6.5		14	R-14_32	11/22/04			0	0		CD	0.25	1	Screw	0	-8			3	3		01/26/05	DRG	Yes	HEL	01/2005	YES	DRA	2/5/2005
R-14_C9	421299.3452	3863339.013	91.5	50.5		10	R-14_5	11/22/04			0	0		GEO	15	12 x 12 x 12	Geo soil	0	4			0	6		01/26/05	DRG	Yes	HEL	01/2005	YES	DRA	2/5/2005

* 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)



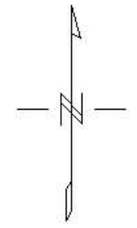


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



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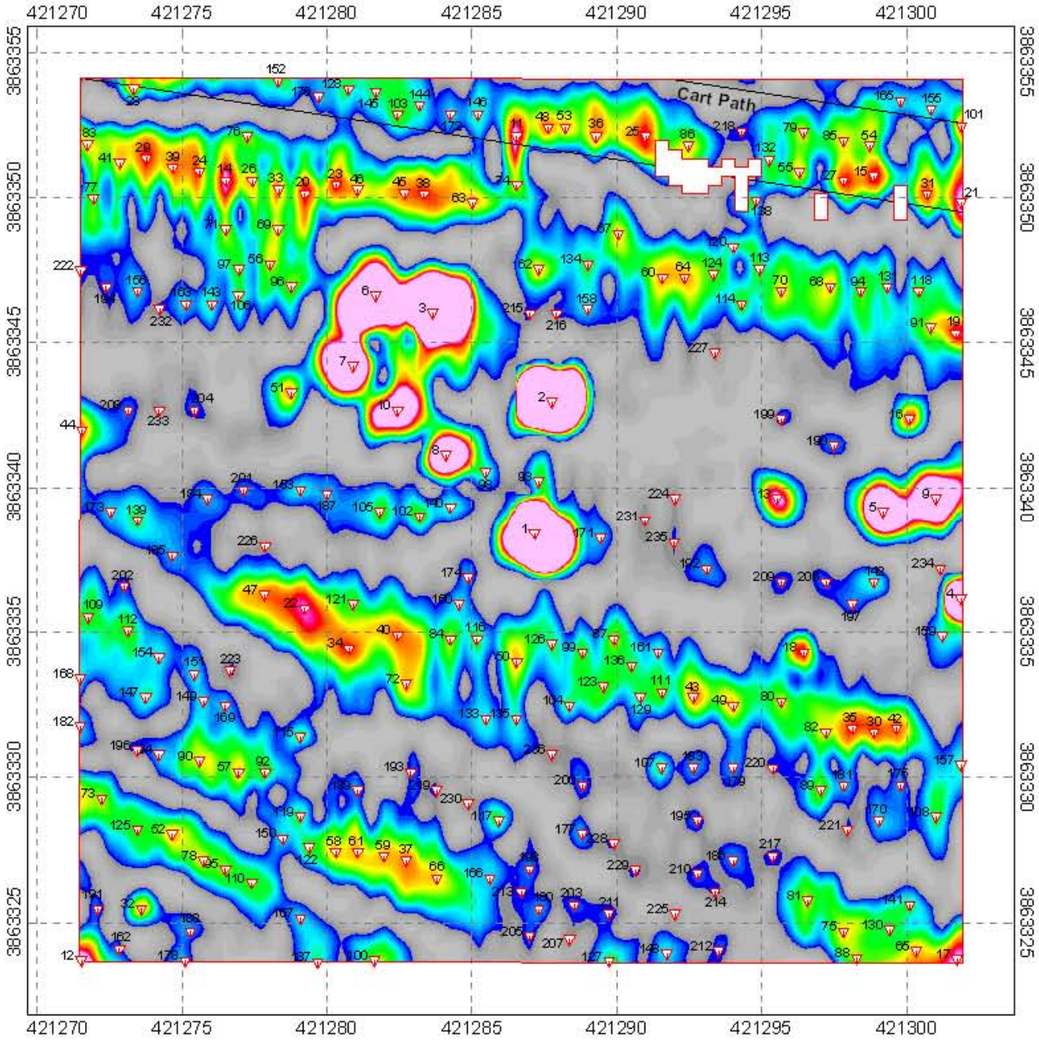
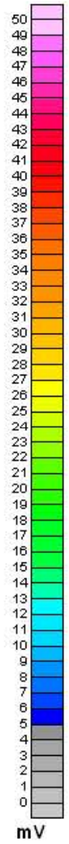
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid R-14
Camp Croft, South Carolina

Date of Survey: November 22, 2004





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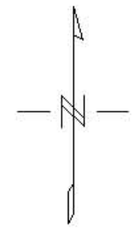

Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid R-14
Camp Croft, South Carolina

Date(s) of Survey: November 22, 2004

FINAL
SITE SPECIFIC FINAL REPORT
VOLUME III

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

US Army Corps of Engineers, Charleston District

Prepared By:

ZAPATA ENGINEERING
TRUST • INTEGRITY • QUALITY
6302 Fairview Road, Suite 600
Charlotte, NC 28210

APRIL 2006

TABLE OF CONTENTS

APPENDICES

VOLUME III

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: R15
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
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											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)	Chi^2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs)	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
R-15_C10	421327.9892	3863349.822	85.5	86		12	R-15_37	11/21/04	49		0	0	01/19/05	CD	0.25	5 x 4	Flat aluminum can	0	8			0.5	0.5		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C11	421318.0993	3863349.149	53.0421	83.7851		11	R-15_15	11/21/04	50		0	0	01/19/05	CD		0.25 x 3 x 6	Metal					1	1		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C12	421327.9884	3863346.927	85.5	76.5		11	R-15_60	11/21/04	31		0	0	01/19/05	CD	1	24	Golf club shaft	0	5			3	3		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C13	421332.0413	3863345.606	98.8028	72.1667		11	R-15_35	11/21/04	25		0	0	01/19/05	CD		3	Nail					1	2		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C14	421303.5114	3863333.001	5.1791	30.7737		11	R-15_8	11/21/04	67		0	0	01/18/05	GEO	0.25	1 x 1	Geo rock	-4.243281	-4.243281			8	8		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C15	421308.3307	3863328.194	21	15		10	R-15_77	11/21/04	4		0	0	01/19/05	GEO	10	8 x 7 x 4	Large geo rock					1	14		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C16	421331.3847	3863343.239	96.6499	64.3974		10	R-15_66	11/21/04	33		0	0	01/19/05	CD	0.25	3 x 2	Flat aluminum can	5.6577086	-5.657709			0	0		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C17	421330.2726	3863344.009	92.9993	66.9247		10	R-15_85	11/21/04	28		0	0	01/19/05	CD			Barb wire (other end of C32)								01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C18	421327.1954	3863347.519	82.8968	78.4426		10	R-15_48	11/21/04	45		0	0	01/19/05	GEO	10	12 x 12 x 12	Geo soil					0	6		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C19	421317.6305	3863352.871	51.5	96		10	R-15_121	11/21/04	22		0	0	01/19/05	GEO	10	12 x 12 x 12	Geo soil					0	6		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C20	421329.5129	3863350.583	90.5	88.5		10	R-15_13	11/21/04	63		0	0	01/19/05	CD		36	Barb wire	18	0			0	1		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C21	421322.9628	3863353.784	69	99		9	R-15_80	11/21/04	8.5		0	0	01/19/05	CD			Banding	0	0			4	4		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C21.1	421322.9628	3863353.784	69	99		9		11/21/04	8.5		0	0	01/19/05	CD		0.5 x 0.5	1/2 x 1/2 bar	0	0			4	4		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C22	421330.1911	3863351.312	92.7254	90.8921		9	R-15_11	11/21/04	62		0	0	01/19/05	CD	1		Putter head	0	0				0		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C22.1	421330.1911	3863351.312	92.7254	90.8921		9		11/21/04	62		0	0	01/19/05	CD			barb wire	0	0				0		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C23	421326.0258	3863346.721	79.059	75.8216		8		11/21/04	32		0	0	01/19/05	GEO	0.25	0.5 x 0.25	Geo soil	0	-12			1	1		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C24	421324.791	3863353.783	75	99		7	R-15_158	11/21/04	28		0	0	01/19/05	CD			Wire (left in hole 2 ft west of flag)								01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C25	421304.2188	3863333.679	7.5	33		6		11/21/04	120		0	0	01/18/05	CD		1.5 x 4	Metal	8.4865629	8.4865629			4	4		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C26	421322.9611	3863347.385	69	78		6	R-15_90	11/21/04	7		0	0	01/19/05	CD	0.25	2 x 2	Metal	10	0			2	2		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C27	421310.165	3863351.045	27	90		5	R-15_55	11/21/04	25		0	0	01/19/05	CD	0.5	0.125 x 4 x 6	Metal					2	4		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C28	421322.9616	3863349.213	69	84		5	R-15_69	11/21/04	6		0	0	01/19/05	CD	0.5	2 x 2	Metal					2	2		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C29	421305.2828	3863353.953	10.9741	99.5402		4	R-15_12	11/21/04	90		0	0	01/19/05	CD	1.5	0.5 x 0.5 x 8	Bar					1	1		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C3	421326.6168	3863344.947	81	70		59	R-15_7	11/21/04	280		0	0	01/19/05	GEO	0.25	1 x 0.5	Geo rock	10	0			2	2		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C30	421305.4665	3863340.263	11.589	54.6108		4	R-15_172	11/21/04	10		0	0	01/19/05	CD	0.25	2 x 0.5	Metal rod	5	0			6	6		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C31	421324.5149	3863349.288	74.0979	84.2461		4	R-15_168	11/21/04	28		0	0	01/19/05	CD		4	Church key					3	3		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C32	421328.9019	3863344.642	88.5	69		4	R-15_19	11/21/04	25		0	0	01/19/05	CD	1	36	Barb wire					2	2		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C33	421329.79	3863325.958	91.4313	7.6794		4	R-15_125	11/21/04	20		0	0	01/18/05	CD	0.5	36	Barb wire - LIP	0	12			4	4		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C35	421327.5484	3863330.963	84.0698	24.1049		3	R-15_156	11/21/04	7		0	0	01/19/05	CD			2 finishing nails					0	1.5		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C36	421311.4706	3863324.195	31.3086	1.8789		3	R-15_100	11/21/04	22		0	0	01/18/05	CD			2 finishing nails					0	1.5		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C37	421321.1346	3863353.632	63	98.5		3	R-15_175	11/21/04	5		0	0	01/19/05	GEO	10	12 x 12 x 12	Geo soil					0	6		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C38	421328.5363	3863348.916	87.2962	83.0292		3	R-15_45	11/21/04	18		0	0	01/19/05	CD	0.25	8	Barb wire					4	4		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C39	421326.6187	3863352.107	81	93.5		3	R-15_220	11/21/04	2		0	0	01/19/05	GEO	10	12 x 12 x 12	Geo soil					0	6		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C4	421319.6482	3863329.132	58.1431	18.0906		55	R-15_3	11/21/04			0	0	01/19/05	CD	2	36 x 0.5	1/2" rebar					0	0		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C40	421321.1339	3863351.042	63	90		3	R-15_41	11/21/04	19		0	0	01/19/05	CD	0.25	8	Large pin					0	0		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C41	421320.3712	3863347.234	60.5	77.5		3	R-15_10	11/21/04	45		0	0	01/19/05	CD	1.5	3 x 2 x 1	Turn buckle	-4.243281	-4.243281			3	3.5		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C42	421302.3918	3863337.793	1.5	46.5		3		11/21/04	7		0	0	01/18/05	CD	0.5	3 x 0.125	4 nails	-8	0			3	4		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C43	421328.4824	3863336.059	87.1308	40.8307		3	R-15_84	11/21/04	10		0	0	01/19/05	CD			2 finishing nails	0	-12			0	1.5		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C44	421320.2205	3863353.48	60	98		3	R-15_175	11/21/04	5		0	0	01/19/05	CD		4 x 0.5	1/2" strap	0	-12			3	3		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C45	421304.2205	3863339.925	7.5	53.5		2	R-15_88	11/21/04	16		0	0	01/19/05	CD			Nail								01/14/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C46	421305.5914	3863339.163	12	51		2	R-15_172	11/21/04	2		0	0	01/19/05	CD		4	Wire	12	0			3	3		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

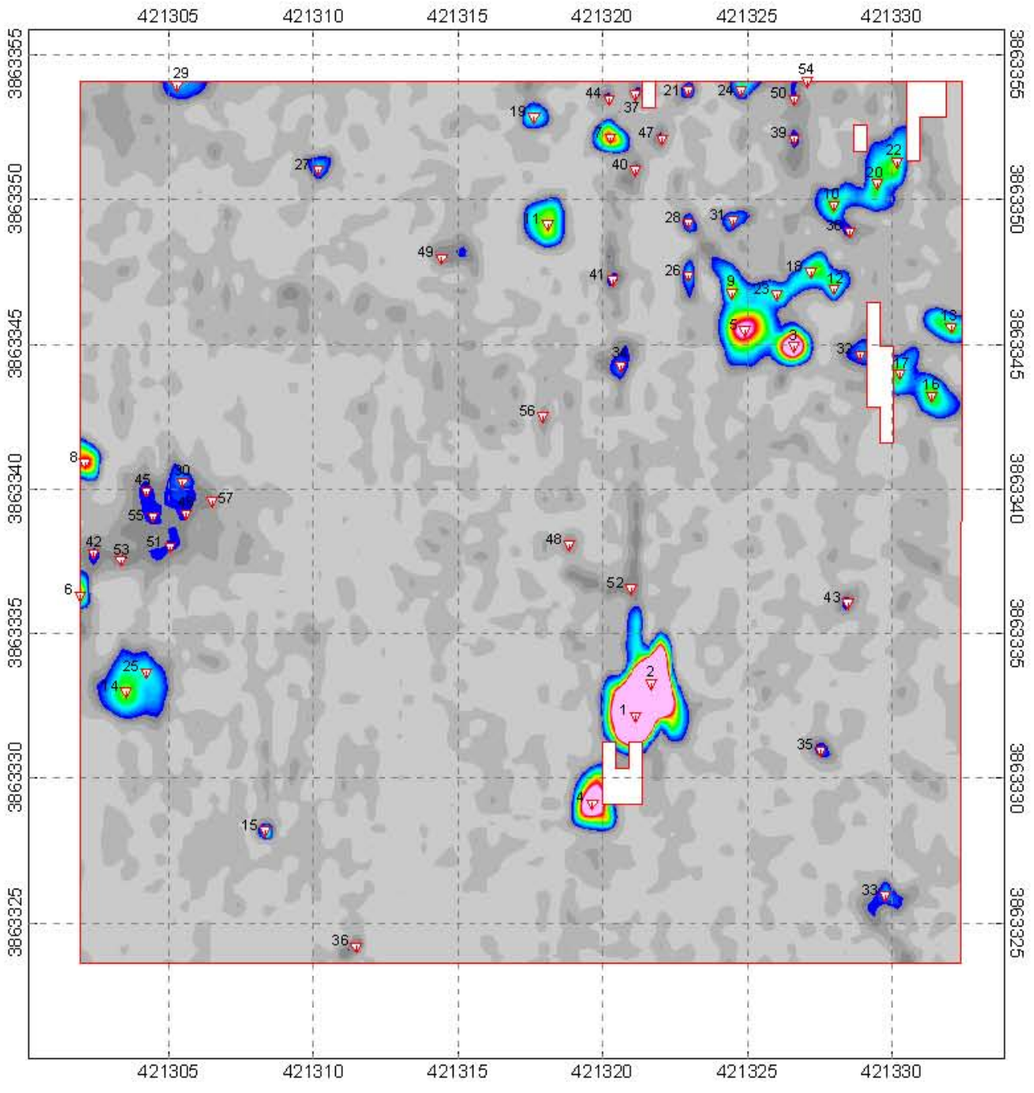
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: R15
Field Book ID:

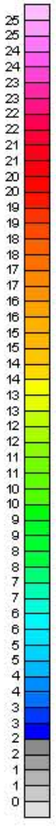
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
R-15_C47	421322.0483	3863352.108	66	93.5		2	R-15_87	11/21/04	3		0	0	01/19/05	CD			Wire	0	12			2	2		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C47.1	421322.0483	3863352.108	66	93.5		2		11/21/04	3		0	0	01/19/05	CD		0.5	1/2" strap	0	-12			2	2		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C47A	421322.0483	3863352.108	66	93.5		2		11/21/04			0	0		CD		3 x 1	1" strap	0	12			2	2		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C47A.1	421322.0483	3863352.108	66	93.5		2		11/21/04			0	0		CD			Tack	0	-12			1	1		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C48	421318.8453	3863338.093	55.5	47.5		2		11/21/04	13		0	0	01/19/05	CD	0.25	2.5 x 2	Metal	0	-28			8	8		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C5	421324.9132	3863345.495	75.4083	71.7966		30	R-15_4	11/21/04	700		0	0	01/19/05	CD			Barb wire - still in hole					9			01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C50	421326.6191	3863353.478	81	98		2	R-15_184	11/21/04	5		0	0	01/19/05	CD			Dart point	-12	0			3	3		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
R-15_C51	421305.0386	3863338.005	10.1868	47.1992		2	R-15_230	11/21/04	12		0	0	01/18/05	CD		12	Barb wire - some wire in ground	-12	0			0	2		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C52	421320.9777	3863336.569	62.5	42.5		2	R-15_217	11/21/04	6		0	0	01/19/05	GEO	10	12 x 12 x 12	Geo soil	10	0			0	6		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C53	421303.3296	3863337.548	4.5781	45.6969		2	R-15_234	11/21/04	7		0	0	01/18/05	CD	0.25	4 x 0.125	Old nail					6	6		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C54	421327.0763	3863354.087	82.5	100		2	R-15_221	11/21/04	20		0	0	01/19/05	GEO	10	12 x 12 x 12	Geo soil	0	8			0	6		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C55	421304.4438	3863339.058	8.2338	50.6546		2		11/21/04	4		0	0	01/19/05	CD	0.25	4 x 0.125	Old nail	-4	0			6	6		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C56	421317.9324	3863342.512	52.5	62		2	R-15_29	11/21/04			0	0		GEO	15	18 x 18 x 12	Geo soil					0	6		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C57	421306.5056	3863339.596	15	52.42		2	R-15_172	11/21/04	3		0	0	01/19/05	CD		4	Wire	0	6			3	3		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C6	421301.9343	3863336.321	0	41.67		25	R-15_6	11/21/04			0	0		CD	0.25	2 x 0.125	Wire	-12.72984	12.729844			4	4		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C7	421320.2677	3863352.143	60.1561	93.6137		23	R-15_25	11/21/04	65		0	0	01/19/05	CD			Beer can, flat	0	0			0	0		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C7.1	421320.2677	3863352.143	60.1561	93.6137		23		11/21/04	65		0	0	01/19/05	CD			nail	0	0			0	0		01/20/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C8	421302.0962	3863340.918	0.5272	56.7576		21	R-15_5	11/21/04			0	0		CD	0.25	2 x 0.125	Wire	-18	0			4	4		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-15_C9	421324.4844	3863346.776	74	76		13		11/21/04	44		0	0	01/19/05	CD	0.25	6 x 4	Flat aluminum can	0	6			0.125	0.125		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005

* 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

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

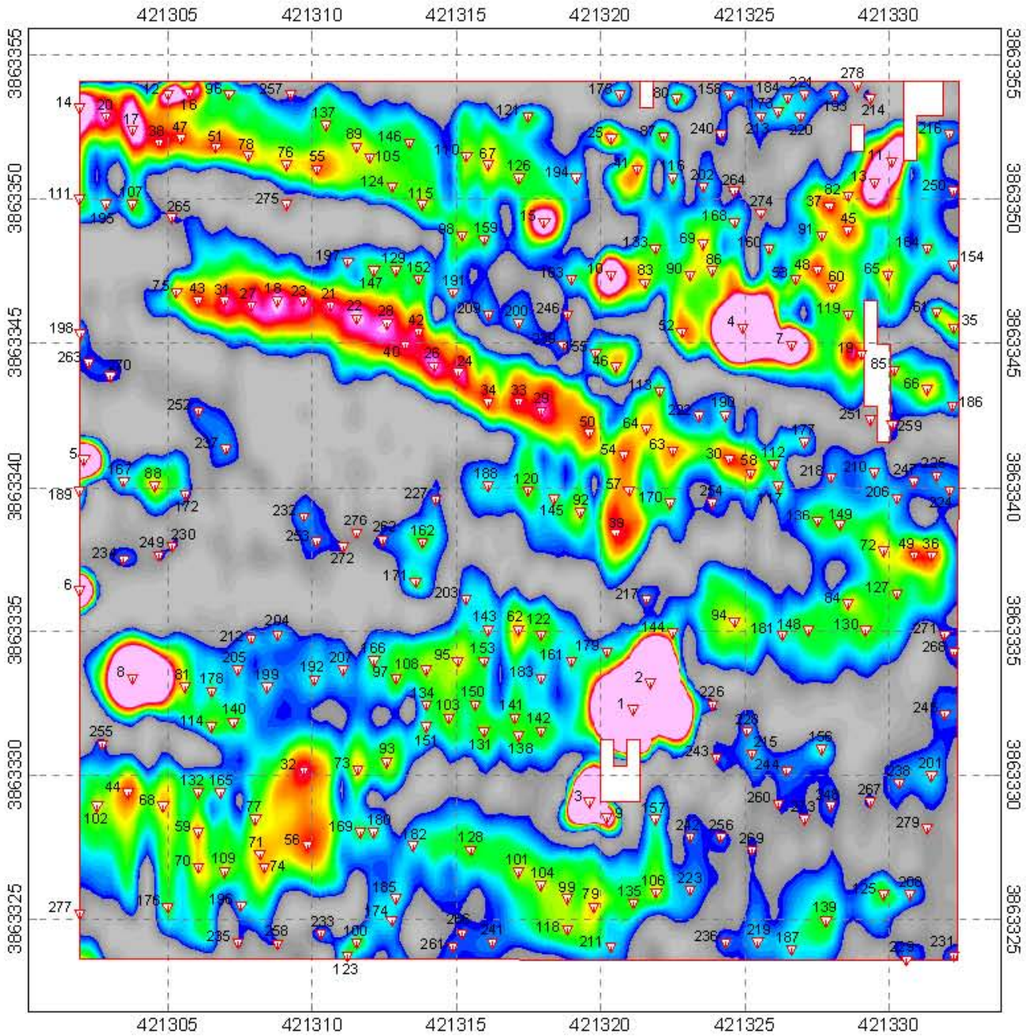
Scale 1:180

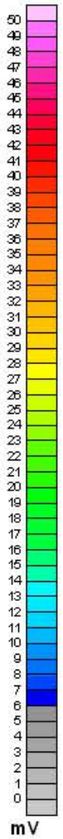
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid R-15
Camp Croft, South Carolina

Date of Survey: November 21, 2004, 2004





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)

Scale 1:180

2.5 0 2.5 5 7.5 10

metres

NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid R-15
Camp Croft, South Carolina

Date(s) of Survey: November 21, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

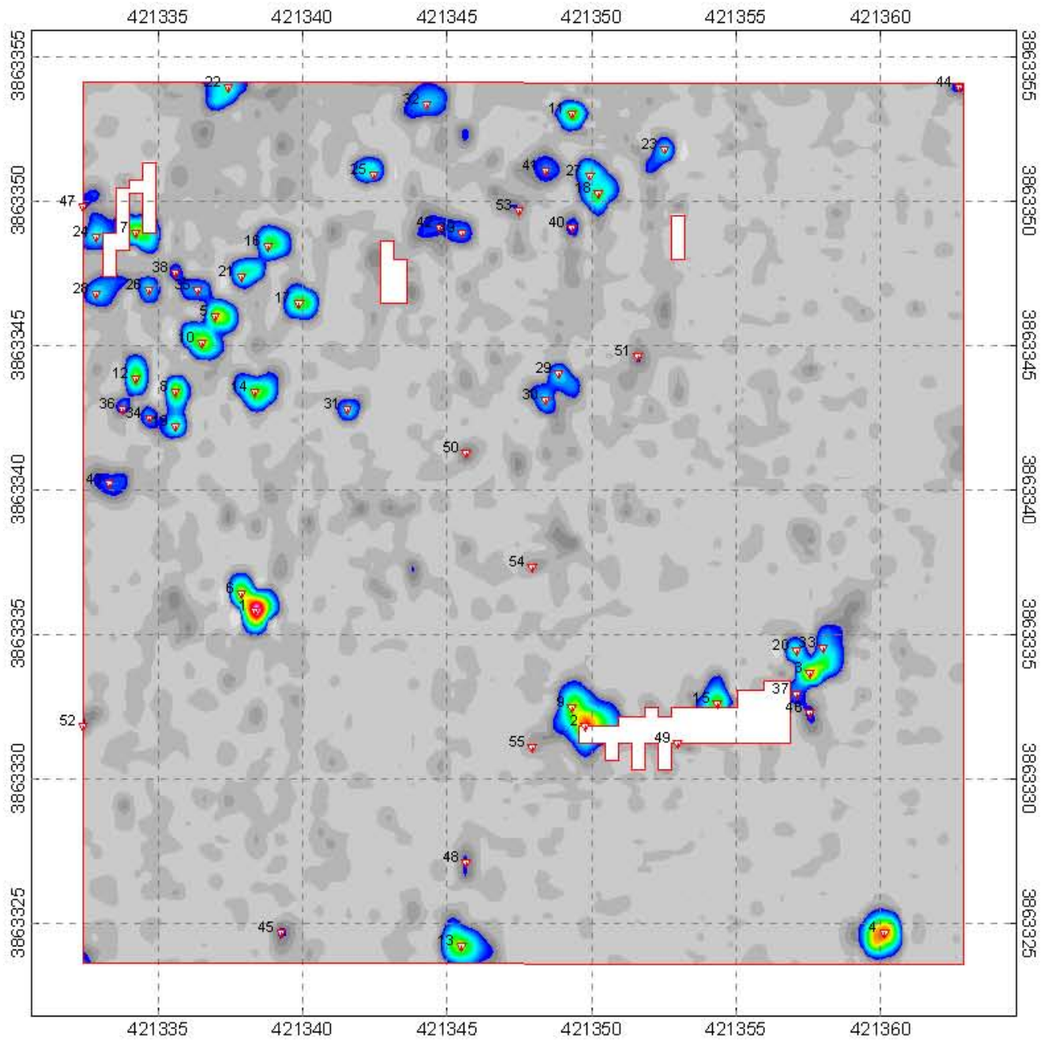
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: R16
Field Book ID:

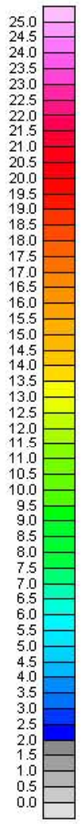
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
R-16_10	421332.8641	3863349.211	1.5	84	42.0		R-16_C24	11/21/04	110		0	0	01/18/05	CD			Beer can										NA	DRA	02/22/06	YES	AJP	3/5/2005
R-16_14	421334.2352	3863348.982	6	83.25	42.0		R-16_C7	11/21/04	46		6	-18	01/18/05	CD			Beer can										NA	DRA	02/22/06	YES	AJP	3/5/2005
R-16_16	421357.5397	3863332.142	82.5	28	25.0		R-16_C46	11/21/04	16		0	0	01/18/05	CD			Sprinkler head - fringe	-36	0			0	0		02/02/05	HEL	NA	DRA	02/22/06	YES	AJP	3/5/2005
R-16_3	421345.5022	3863324.223	43	2	103.0		R-16_C13	11/21/04	94		0	-12	01/18/05	CD			Sprinkler										NA	DRA	02/22/06	YES	AJP	3/5/2005
R-16_30	421362.7219	3863341.281	99.5	58	17.0			11/21/04	22		6	6	01/18/05	CD			Sprinkler										NA	DRA	02/22/06	YES	AJP	3/5/2005
R-16_9	421332.4002	3863323.617	0	0	46.0			11/21/04	56		0	0	01/18/05	CD			Survey nail										NA	DRA	02/22/06	YES	AJP	3/5/2005
R-16_C10	421336.5193	3863345.097	13.5	70.5		13	R-16_8	11/21/04	100		0	0	01/18/05	CD	0.75	5 x 0.75	Bolt	20	0			4	4.5		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-16_C14	421338.347	3863343.42	19.5	65		11	R-16_24	11/21/04	16		0	0	01/18/05	CD	0.25	5 x 4	Flat aluminum can					1	1		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-16_C21	421337.8911	3863347.397	18	78.05		8	R-16_25	11/21/04	35		0	0	01/18/05	GEO			Geo soil					0			01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-16_C22	421337.4358	3863353.932	16.5	99.5		8	R-16_33	11/21/04	34		0	0	01/18/05	GEO			Geo soil					0	6		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-16_C27	421349.9274	3863350.882	57.5	89.5		7		11/21/04	28		0	0	01/18/05	GEO	0.25	0.5 x 0.25	Geo rock					2	0		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-16_C38	421335.6059	3863347.534	10.5	78.5		4		11/21/04	12		0	0	01/18/05	GEO	0.25	0.25 x 0.25	Geo rock	-8.486563	8.4865629			0	0		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-16_C41	421348.404	3863351.035	52.5	90		3	R-16_40	11/21/04	14		0	0	01/18/05	CD	5	5 x 4 x 0.5	Metal plate	0	4			6	6.25		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-16_C44	421362.7253	3863353.926	99.5	99.5		3	S-16_15	11/21/04			0	0	01/18/05	CD			Golf cart asphalt road - no dig - possible survey nail								01/26/05	DRG	NA	DRA	02/22/06	YES	ALJ	3/5/2005
R-16_C45	421339.2561	3863324.682	22.5	3.5		3	R-16_119	11/21/04	1		0	0	01/18/05	GEO			Geo soil					0	6		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-16_C49	421352.969	3863331.229	67.5	25		2		11/21/04			0	0	01/18/05	CD	0.25	20 x 0.125	Wire - poss wall	10	0			4	7		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-16_C6	421337.8881	3863336.413	18	42		15		11/21/04			0	0	01/18/05	CD	0.25	0.5 x 0.25	Geo Rock - Poss flag 5 - edge of golf cart road					2	2		01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-16_C9	421349.313	3863332.449	55.5	29		13		11/21/04	150		0	0	01/18/05	CD			Nails in retaining wall - wall nearby								01/26/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005

* 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)



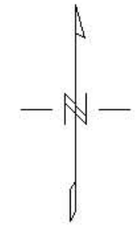


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



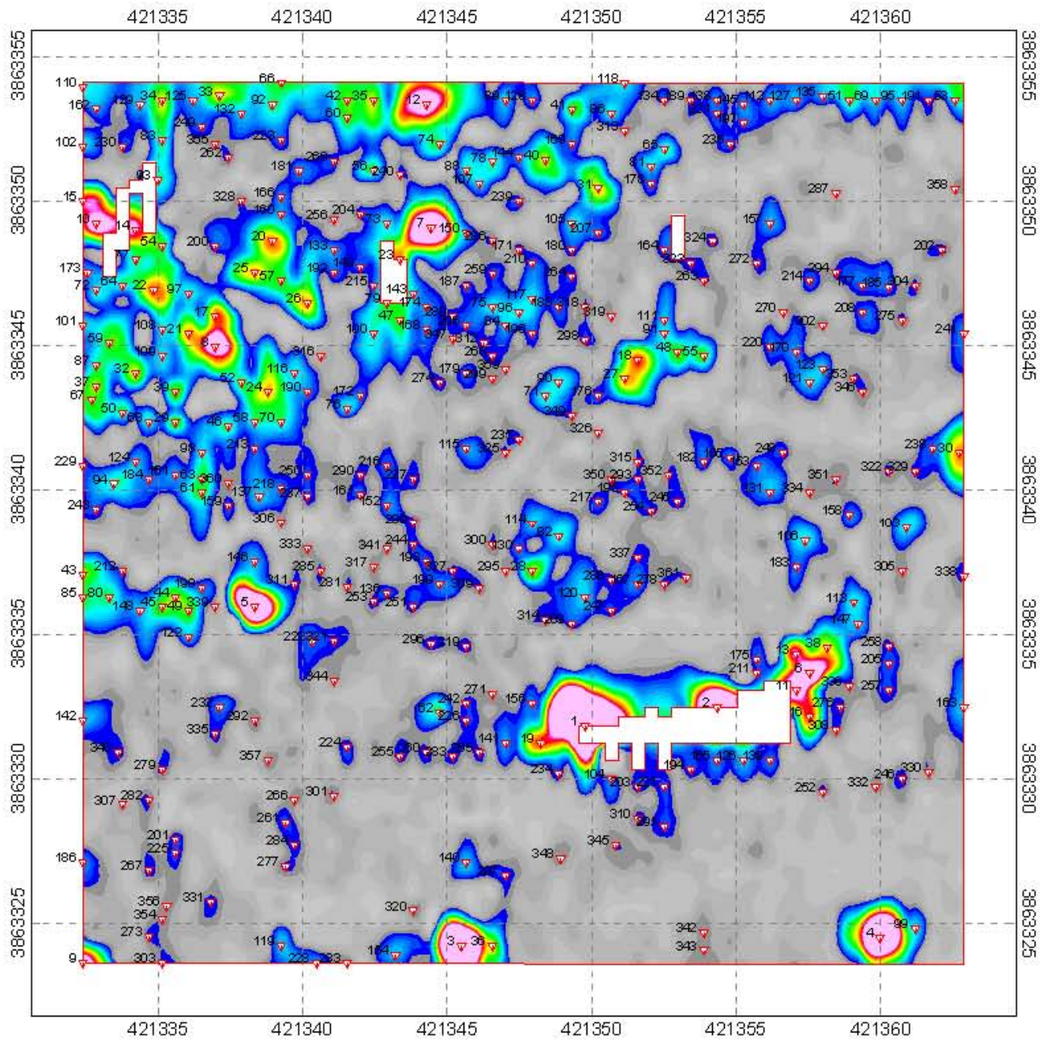
Scale 1:180

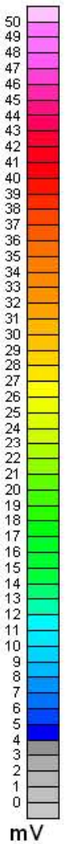
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid R-16
Camp Croft, South Carolina

Date of Survey: November 21, 2004



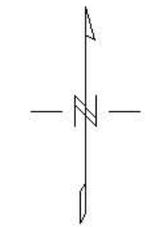


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

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metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid R-16
Camp Croft, South Carolina

Date of Survey: November 21, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

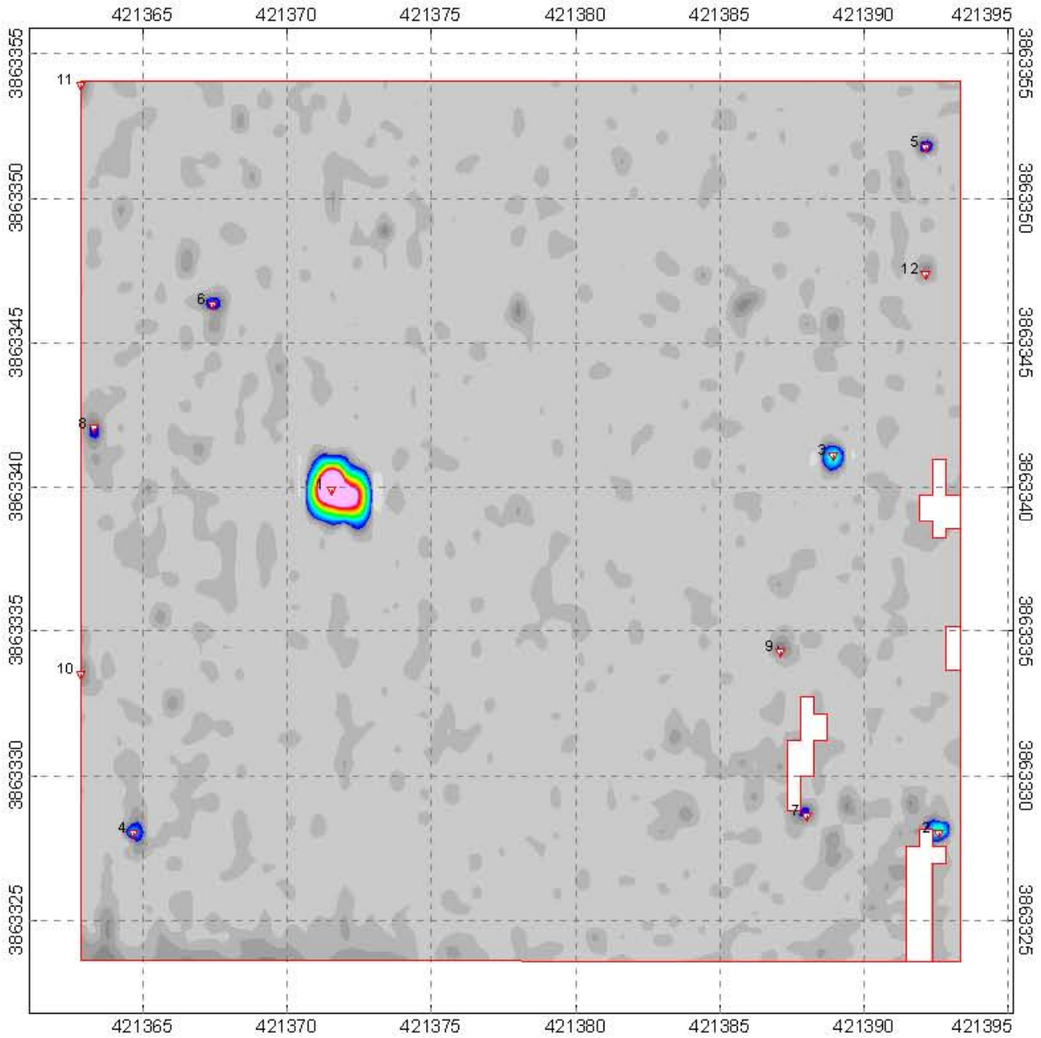
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: R17
Field Book ID:

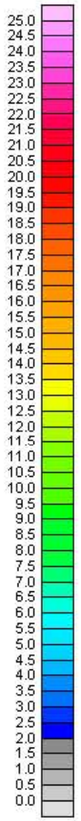
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
R-17_119	421367.4405	3863325.893	15	7.5	4.0			11/23/04			0	0		NC			Fringe - Rechecked still NC										YES	TF	01/26/06	NA	DRA	02/22/06
R-17_138	421369.2687	3863326.045	21	8	4.0			11/23/04	3		0	12	01/17/05	MD			Shot gun shell - Fringe	0	6			4	3		02/02/05	HEL	NA	DRA	02/22/06	YES	ALJ	3/5/2005
R-17_16	421365.614	3863332.14	9	28	9.0			11/23/04	5		12	-12	01/17/05	GEO			Small rock - Fringe	6	0			3	3		02/02/05	HEL	NA	DRA	02/22/06	YES	DRA	2/5/2005
R-17_23	421392.1277	3863351.938	96	93	10.0		R-17_C5	11/23/04			0	0	01/17/05	NC			No contact										NA	DRA	02/22/06	YES	ALJ	3/5/2005
R-17_C10	421362.8722	3863333.511	0	32.5		2		11/23/04	2		12	12	01/17/05	CD	0.25	2 x 0.75	Spark plug	2.8288543	-2.828854			3	3.5		01/26/05	DRG	Yes	HEL	01/26/06	YES	DRA	2/5/2005

* 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)



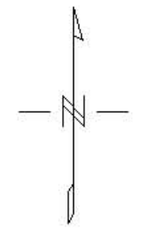


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



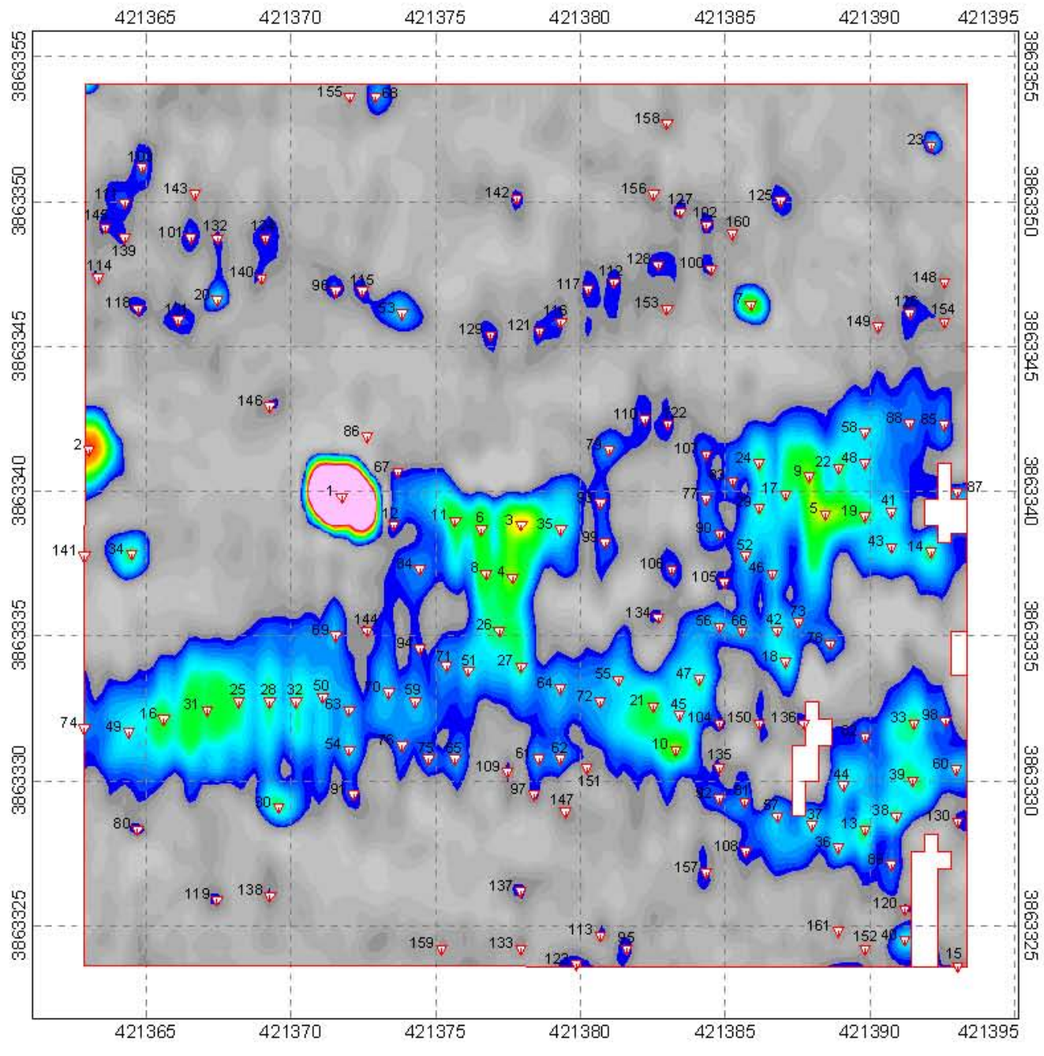
Scale 1:180

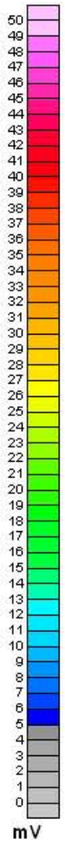
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid R-17
Camp Croft, South Carolina

Date of Survey: November 23, 2004



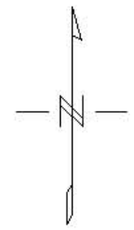


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid R-17
Camp Croft, South Carolina

Date(s) of Survey: November 23, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: R18
Field Book ID:

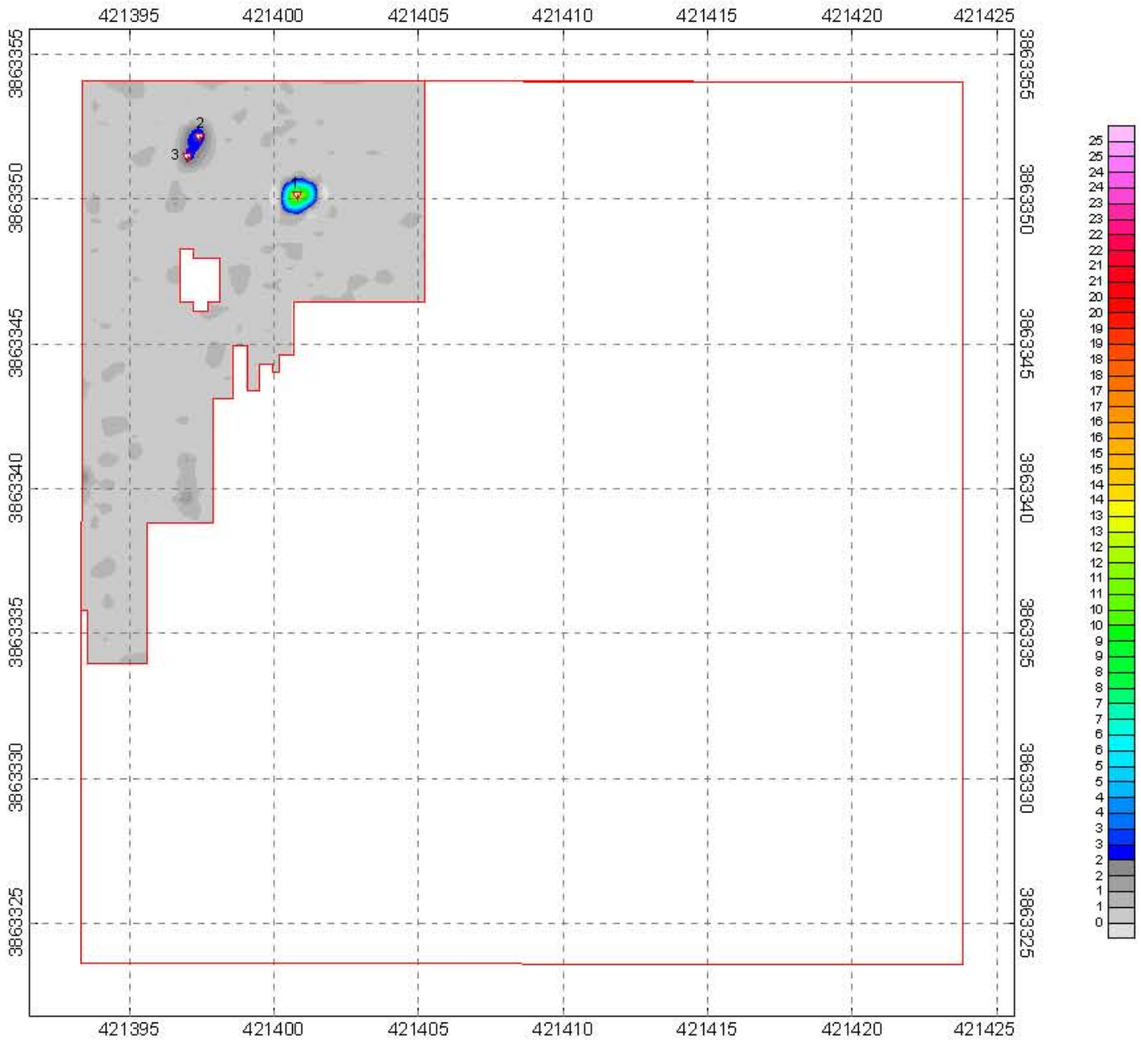
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
R-18_C1	421400.799	3863350.15	24.4608	87.1413		12	R-18_1	11/27/04	36		0	0	01/18/05	CD	0.25	5.5 x 3 x 1	Aluminum can	5	0			2	2.5		01/20/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
R-18_C2	421397.4264	3863352.178	13.3903	93.7923		3	R-18_4	11/27/04	12		0	0	01/18/05	MD	0.25	4 x 0.625	Burster tube					1.5	1.5		01/20/05	DRG	Yes	HEL	01/26/05	YES	DRA	2/5/2005
R-18_C3	421397.0026	3863351.479	12	91.5		3	R-18_13	11/27/04	5		0	0	01/18/05	NC		2 x 2 x 1	No contact dig = 2' x 2' x 1' located 27* from C2 is C3								01/20/05	DRG	Yes	HEL	01/26/05	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)

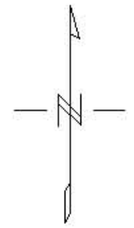
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys



Legend

Area of Investigation

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



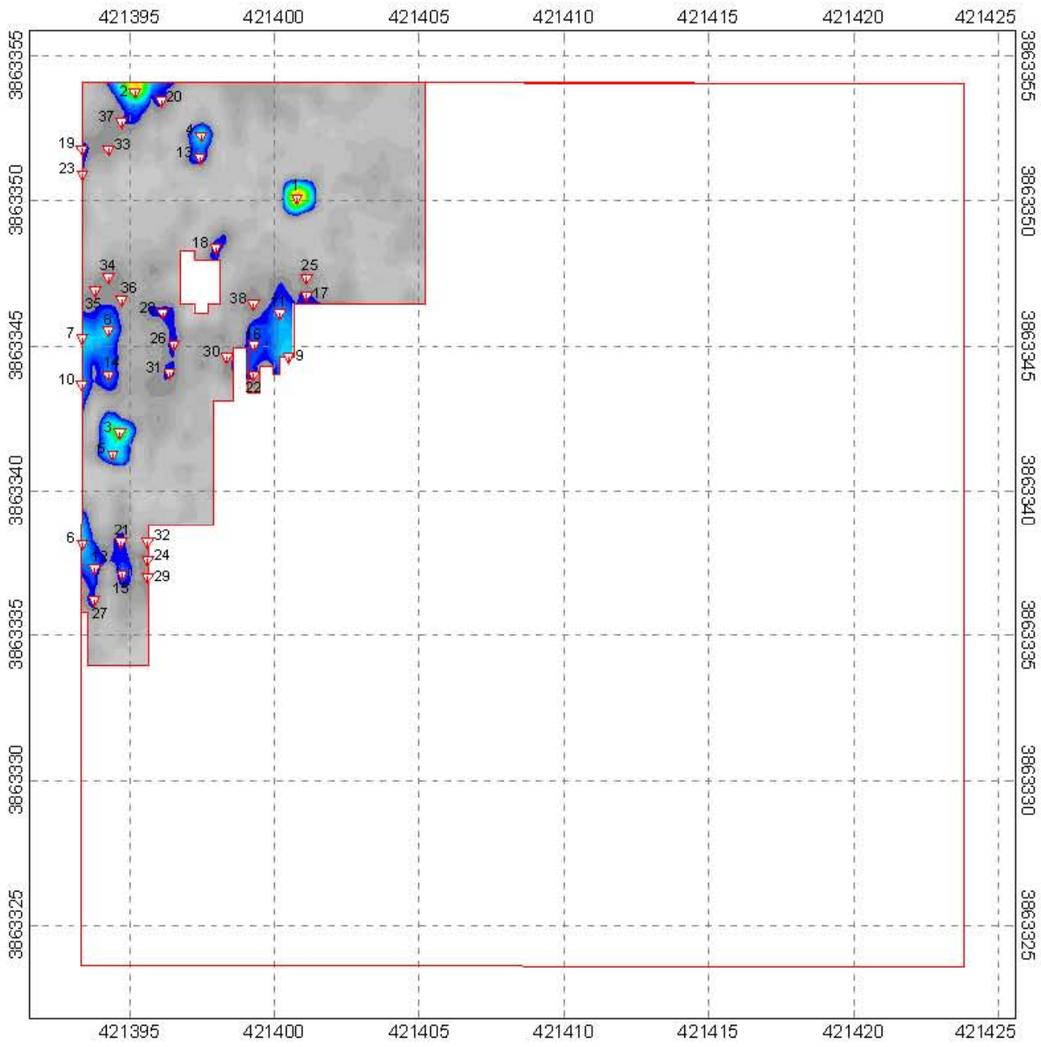
Scale 1:180

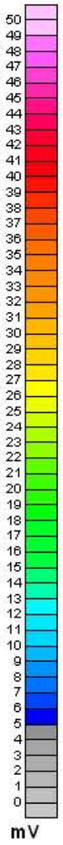
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid R-18
Camp Croft, South Carolina

Date of Survey: November 27, 2004



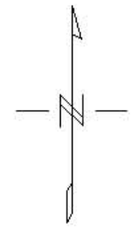


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

2.5 0 2.5 5 7.5 10

metres

NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid R-18
Camp Croft, South Carolina

Date(s) of Survey: November 27, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: R19
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)												
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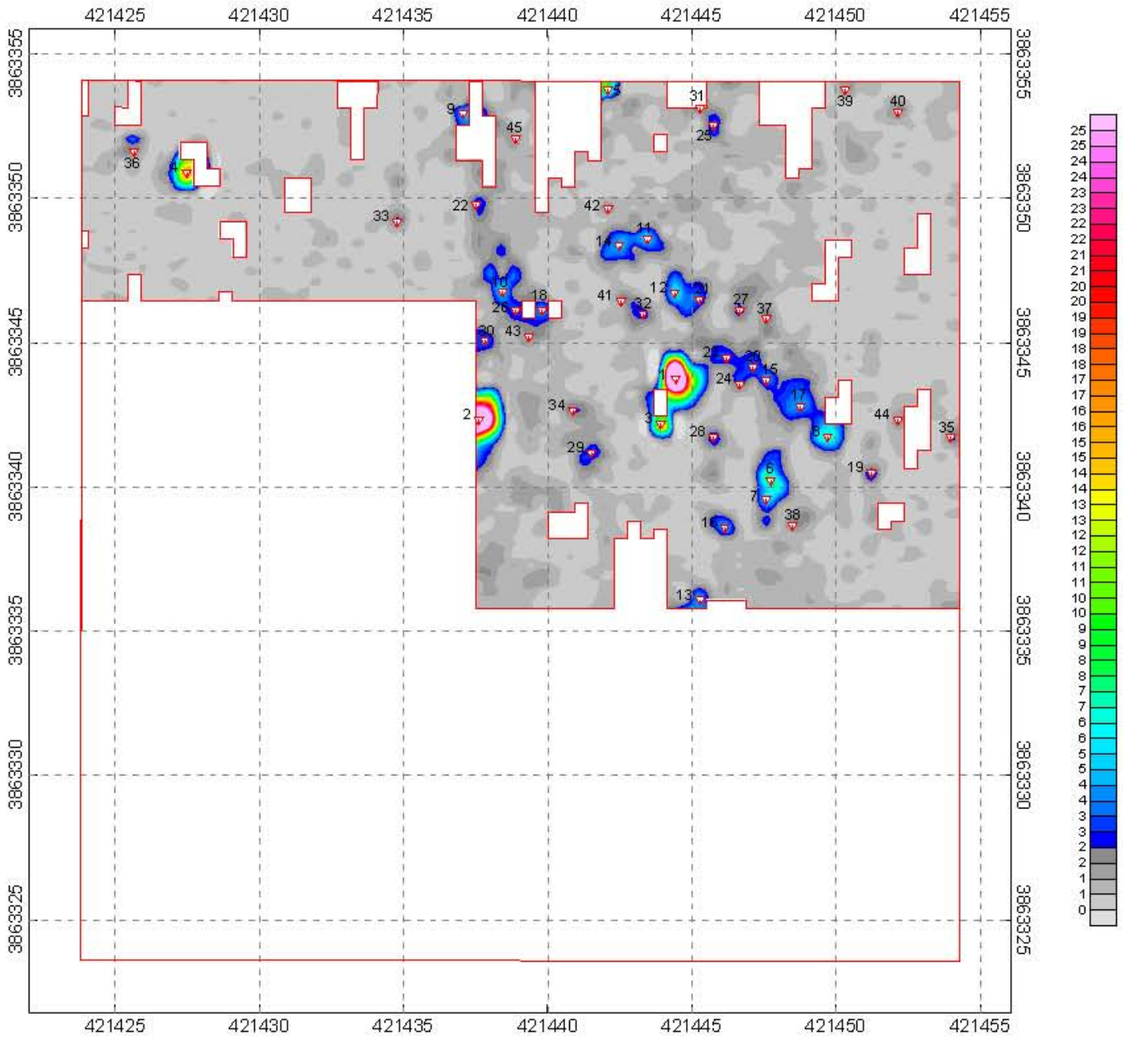
R-19_11	421443.3151	3863348.572	64	82	33.0		R-19_C11	11/29/04	53		0	0	01/08/05	CD	0.25	18	Wire	-12	0				0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_12	421442.3085	3863348.273	60.6967	81.0169	31.0		R-19_C14	11/29/04	21		0	0	01/08/05	GEO			Rock						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_13	421437.0684	3863352.892	43.4945	96.1733	30.0		R-19_C9	11/29/04	40		0	0	01/08/05	GEO			Rock						2		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_14	421445.0908	3863349.776	69.8269	85.9533	24.0			11/29/04			6	-6	01/08/05	CD	0.25	12	Wire						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_15	421444.5333	3863346.591	68	75.5	27.0		R-19_C12	11/29/04	32		0	0	01/08/05	GEO			Rock	0	-6				2		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_17	421446.3832	3863343.468	74.0739	65.2517	16.0		R-19_C24	11/29/04	30		0	0	01/08/05	GEO			Rock						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_20	421453.5206	3863342.323	97.5	61.5	15.0			11/29/04	19		18	0	01/08/05	CD	0.5	0.5	Horseshoe						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_24	421452.1524	3863353.14	93	97	14.0		R-19_C40	11/29/04	14		12	0	01/08/05	CD	0.25	6	Nail	0	-6				1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_25	421446.873	3863346.593	75.6786	75.5103	14.0			11/29/04	20		0	0	01/08/05	GEO			Rock						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_26	421450.5753	3863354.006	87.8231	99.8429	12.0		R-19_C39	11/29/04	34		0	12	01/08/05	CD			Pliers						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_27	421445.1594	3863346.383	70.0549	74.8188	13.0		R-19_C21	11/29/04	20		6	0	01/08/05	GEO			Rock						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_28	421439.3536	3863346.821	51	76.25	13.0			11/29/04	25		0	0	01/08/05	GEO			Rock						2		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_30	421445.8497	3863352.61	72.3149	95.256	13.0		R-19_C25 / R-19_	11/29/04	13		24	0	01/08/05	CD	0.25		Wire						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_31	421447.5795	3863343.848	78	66.5	14.0		R-19_C15	11/29/04	24		0	0	01/08/05	CD	0.25	1.5	Nail	0	-6				3		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_32	421436.9179	3863353.753	43	99	10.0			11/29/04	26		12	0	01/08/05	CD	0.25	1	Wire						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_33	421448.6457	3863342.781	81.5	63	12.0		R-19_C17	11/29/04	26		0	0	01/08/05	GEO			Rock						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_36	421437.4136	3863349.697	44.6303	85.6889	9.0		R-19_C22	11/29/04	15		0	0	01/08/05	GEO			Rock						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_39	421447.58	3863345.828	78	73	10.0		R-19_C37	11/29/04	20		0	0	01/08/05	GEO			Large rock	16.973126	-16.97313				8		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_4	421449.7118	3863341.714	85	59.5	74.0		R-19_C8	11/29/04	75		0	-6	01/08/05	CD	0.25	18	Wire						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_40	421451.2243	3863340.457	89.965	55.374	7.0		R-19_C19	11/29/04	3		0	-12	01/08/05	GEO			Rock						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_41	421446.9703	3863344.305	76	68	10.0		R-19_C20	11/29/04	22		-18	6	01/08/05	GEO			Rock						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_45	421438.4792	3863352.546	48.1252	95.0375	8.0			11/29/04	25		6	0	01/08/05	GEO			Rock						2		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_46	421442.5528	3863346.439	61.5	75	7.0		R-19_C41	11/29/04	16		0	0	01/08/05	GEO			Rock						2		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_47	421443.2795	3863345.77	63.8858	72.8041	8.0		R-19_C32	11/29/04	22		0	0	01/08/05	GEO			Rock						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_48	421453.7164	3863353.979	98.1321	99.7549	6.0			11/29/04	5		0	0	01/08/05	CD	1		Screw driver	0	12				0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_6	421438.3713	3863347.208	47.7757	77.5198	47.0			11/29/04	50		0	0	01/08/05	CD	0.25		Nails						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_C23	421446.2086	3863344.458	73.5	68.5		3		11/29/04			0	0		CD	.25	.4 x .5 x .25	steel, Rusted	0	0	NA	0	1	1	R19_C23 - #017	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
R-19_C27	421446.6661	3863346.133	75	74		3		11/29/04			0	0		CD	.25	9 x .25 x .25	nails, Rusted	0	0	NA	15	1	1	R19_C27 - #022	1/26/06	rly	YES	TF	01/26/06	YES	RVW	01/25/06
R-19_C42	421442.0966	3863349.639	60	85.5		2		11/29/04			0	0		CD	.25	12 x .25 x .25	wire, Rusted	0	0	NA	0	2	2	R19_C42 - #019	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
R-19_C44	421452.1495	3863342.323	93	61.5		2		11/29/04			0	0		CD	.25	4 x .25 x .25	wire, Rusted	0	0	NA	0	1	1	R19_C44 - #021	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
R-19_C5	421442.0977	3863353.752	60	99		11	R-19_8	11/29/04			0	0		CD	.25	3 x .25 x .25	nails, Rusted	0	0	NA	0	2	2	R19_C5 - #024	1/26/06	rly	NA	DRA	02/22/06	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)



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)

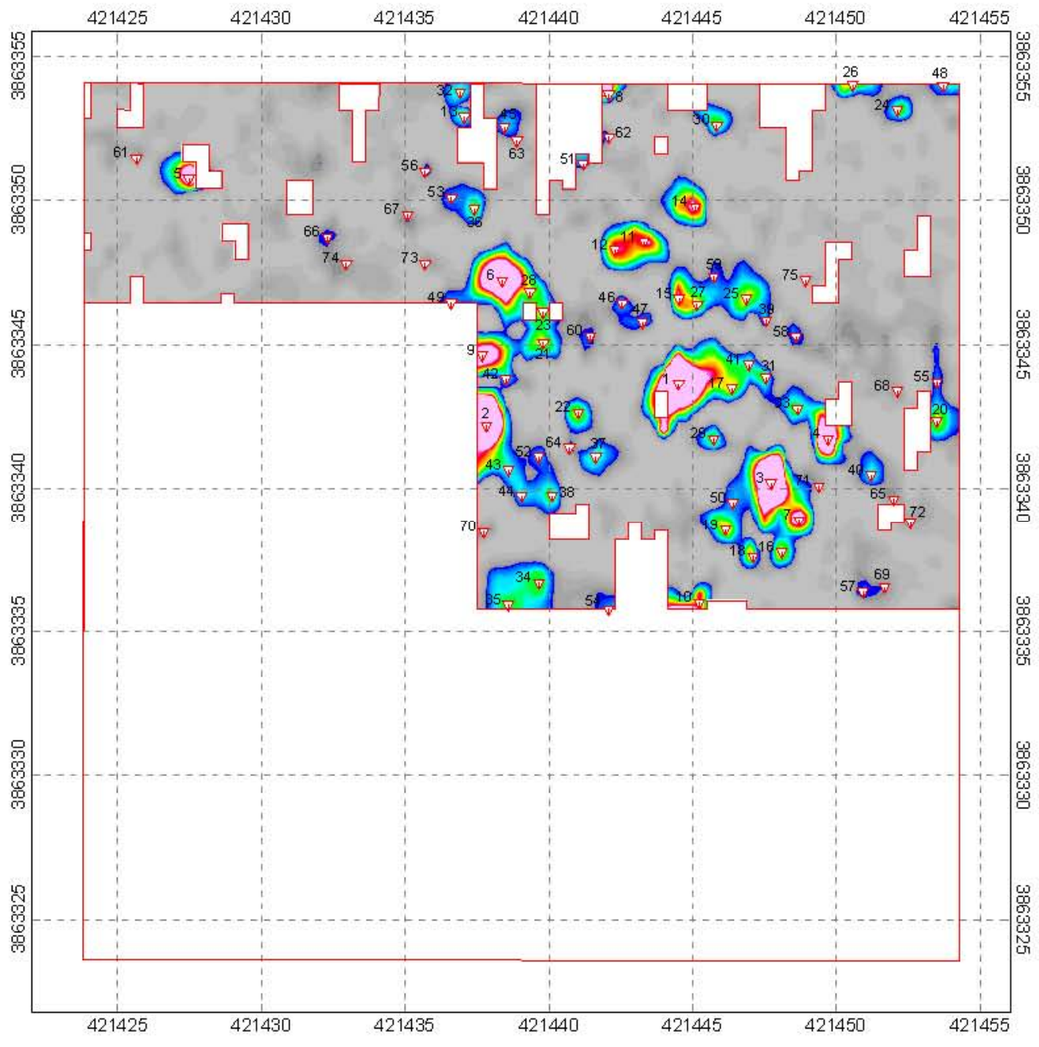
Scale 1:180

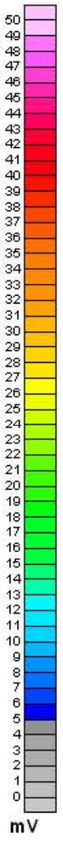
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid R-19
Camp Croft, South Carolina

Date of Survey: November 29, 2004





NAEVA GEOPHYSICS INC.
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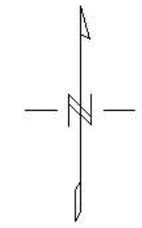


Scale 1:180

2.5 0 2.5 5 7.5 10

metres

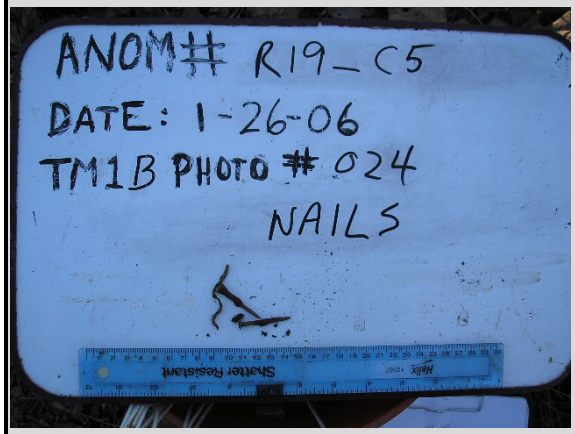
NAD83 / UTM zone 17N

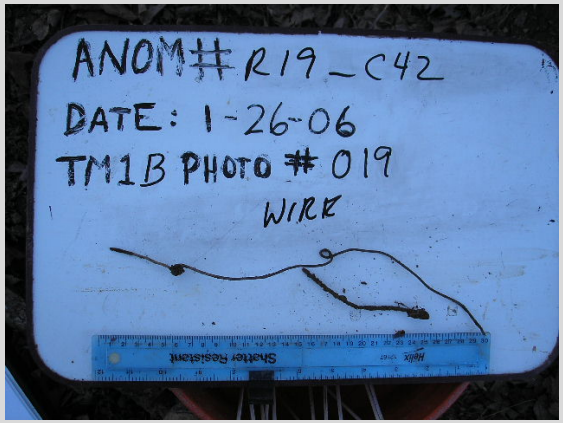
Zapata Engineering

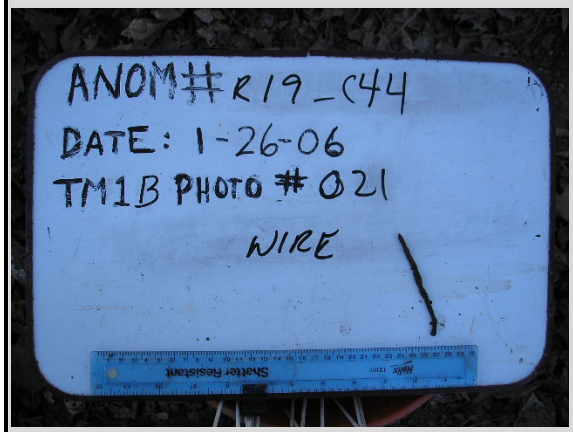
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid R-19
Camp Croft, South Carolina

Date(s) of Survey: November 29, 2004

GRID R19 DIG PHOTOS







ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: R20
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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				Depth (in)											
Unique Target ID	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ****	Approx. weight (lbs)	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
R-20_1	421478.0594	3863352.225	78	94	1428.0		R-20_C1	11/28/04	3		0	0	01/08/05	CD	0.25	3	Wire rust flakes	0	12			0			01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_11	421466.7013	3863345.459	40.7419	71.7944	29.0		R-20_C11	11/28/04	34		-18	0	01/08/05	CD			Wire						4		01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_14	421463.5799	3863346.74	30.5	76	29.0		R-20_C9	11/28/04	27		6	0	01/08/05	GEO			Rock								01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_15	421466.627	3863343.237	40.5	64.5	25.0		R-20_C23	11/28/04	55		0	-6	01/08/05	GEO			Rock						0		01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_16	421465.8639	3863339.276	38	51.5	20.0		R-20_C25	11/28/04	13		0	0	01/08/05	GEO			Rock	-8.486563	-8.486563				0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_17	421465.5609	3863345.979	37	73.5	26.0		R-20_C13	11/28/04	31		0	0	01/08/05	GEO			Rock								01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_18	421467.257	3863338.528	42.5712	49.0479	22.0		R-20_C31	11/28/04	33		-6	12	01/08/05	CD		6	Wire						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_20	421464.7992	3863346.893	34.5	76.5	21.0		R-20_C10	11/28/04	25		0	0	01/08/05	CD	0.25	6	6' wire					0			01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_21	421462.0526	3863334.401	25.5	35.5	20.0		R-20_C22	11/28/04	11		0	0	01/08/05	CD		12	Rock/wire						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_22	421464.4949	3863348.873	33.5	83	18.0		R-20_C17	11/28/04	25		0	0	01/08/05	CD	0.25	19	Wire						2		01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_23	421458.0434	3863338.447	12.3427	48.78	16.0			11/28/04	21		0	0	01/08/05	GEO			Rock						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_24	421467.5427	3863348.112	43.5	80.5	17.0			11/28/04	17		6	-6	01/08/05	GEO			Rock	9	0				6		01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_25	421459.3124	3863345.674	16.5	72.5	18.0		R-20_C16 / R-20_	11/28/04	16		0	0	01/08/05	CD		24	Wire/rock						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_26	421463.8833	3863341.408	31.5	58.5	13.0			11/28/04	3		18	0	01/08/05	GEO			Rock						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_27	421464.1903	3863349.635	32.5	85.5	15.0		R-20_C20	11/28/04	20		0	0	01/08/05	CD			Wire - Part of 22								01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_29	421459.1738	3863340.578	16.0495	55.7759	15.0		R-20_C28	11/28/04	16		-6	-6	01/08/05	CD		12	Wire						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_31	421464.4962	3863353.748	33.5	99	12.0			11/28/04			0	0		CD	.25	3 x .25 x .25	nail, Rusted	0	0	NA	90	0	1.5	R20_31 - #046/R20_31a - #028	1/23/06	barn	YES	TF	01/26/06	YES	RVW	01/25/06
R-20_33	421457.5505	3863340.117	10.7242	54.2619	12.0			11/28/04			0	0		CD	.25	10 x .25 x .25	wire ring, Rusted	0	0	NA	0	2	2	R20_33 - #018/R20_33a - #029	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
R-20_4	421471.634	3863349.326	56.9218	84.4843	53.0		R-20_C21	11/28/04	42		0	0	01/08/05	CD	0.25	36	Nails / 3' wire	0	6				3		01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_40	421460.5316	3863345.522	20.5	72	10.0			11/28/04	5		0	0	01/08/05	GEO			Rock						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_41	421467.3889	3863343.084	43	64	9.0		R-20_C29	11/28/04	41		0	0	01/08/05	GEO			Rock						7		01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_42	421469.3717	3863348.873	49.5	83	9.0			11/28/04	8		8.4	12	01/08/05	GEO			Rock	-12	0				2		01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_43	421467.3899	3863346.588	43	75.5	9.0			11/28/04	11		0	0	01/08/05	GEO			Rock						3		01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_45	421457.1807	3863352.682	9.5	95.5	7.0			11/28/04	6		-6	-24	01/08/05	GEO			Rock						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_46	421464.1883	3863342.17	32.5	61	7.0			11/28/04	17		0	-12	01/08/05	GEO			Rock						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_47	421473.6384	3863346.893	63.5	76.5	9.0			11/28/04	10		6	-6	01/08/05	GEO			Rock (2ea)	6	0				4		01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_48	421463.6141	3863342.808	30.6155	63.0919	8.0			11/28/04	13		0	0	01/08/05	CD		2	Nail						2		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_49	421458.8269	3863352.076	14.9014	93.5115	9.0		R-20_C33	11/28/04	4		0	0	01/08/05	GEO			Rock	0	-12				0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_52	421466.1749	3863338.385	39.0211	48.5781	8.0			11/28/04			0	0		CD	.25	6 x .25 x .25	wire, Rusted	0	0	NA	0	2	2	R20_52 - #013	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
R-20_54	421459.3363	3863352.792	16.5721	95.8608	8.0			11/28/04			0	0		CD	.25	17 x .25 x .25	wire, Rusted	0	0	NE	30	4	5	R20_54 - #047	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
R-20_6	421457.1797	3863349.026	9.5	83.5	57.0		R-20_C4	11/28/04	105		0	0	01/08/05	CD		36	Wire/rock						2		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_60	421470.1324	3863343.998	52	67	6.0			11/28/04	3		6	6	01/08/05	GEO			Rock						2		01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_61	421465.7139	3863348.112	37.5	80.5	8.0			11/28/04	14		-6	6	01/08/05	CD				6	0							RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_62	421470.2984	3863348.211	52.5409	80.8264	6.0			11/28/04	10		0	0	01/08/05	GEO			Rock						3		01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_63	421470.1333	3863347.198	52	77.5	7.0			11/28/04	10		12	0	01/08/05	GEO			Rock						3		01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_64	421454.3208	3863342.551	0.126	62.2497	6.0			11/28/04	4		4.8	-9	01/08/05	GEO			Rock						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_65	421462.0573	3863351.768	25.5	92.5	6.0			11/28/04	10		0	0	01/08/05	CD		3	Nail	0	-6				2		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_67	421466.3233	3863347.502	39.5	78.5	6.0			11/28/04	4		0	0	01/08/05	MD	0.25	0.5 x 0.25 x 0.5	Found out of hole						2		01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_68	421472.9068	3863345.877	61.1008	73.1659	7.0		R-20_C39	11/28/04	10		12	6	01/08/05	GEO			Rock	6	0						01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_69	421469.5226	3863343.389	50	65	6.0			11/28/04	3		0	0	01/08/05	GEO			Rock						2		01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

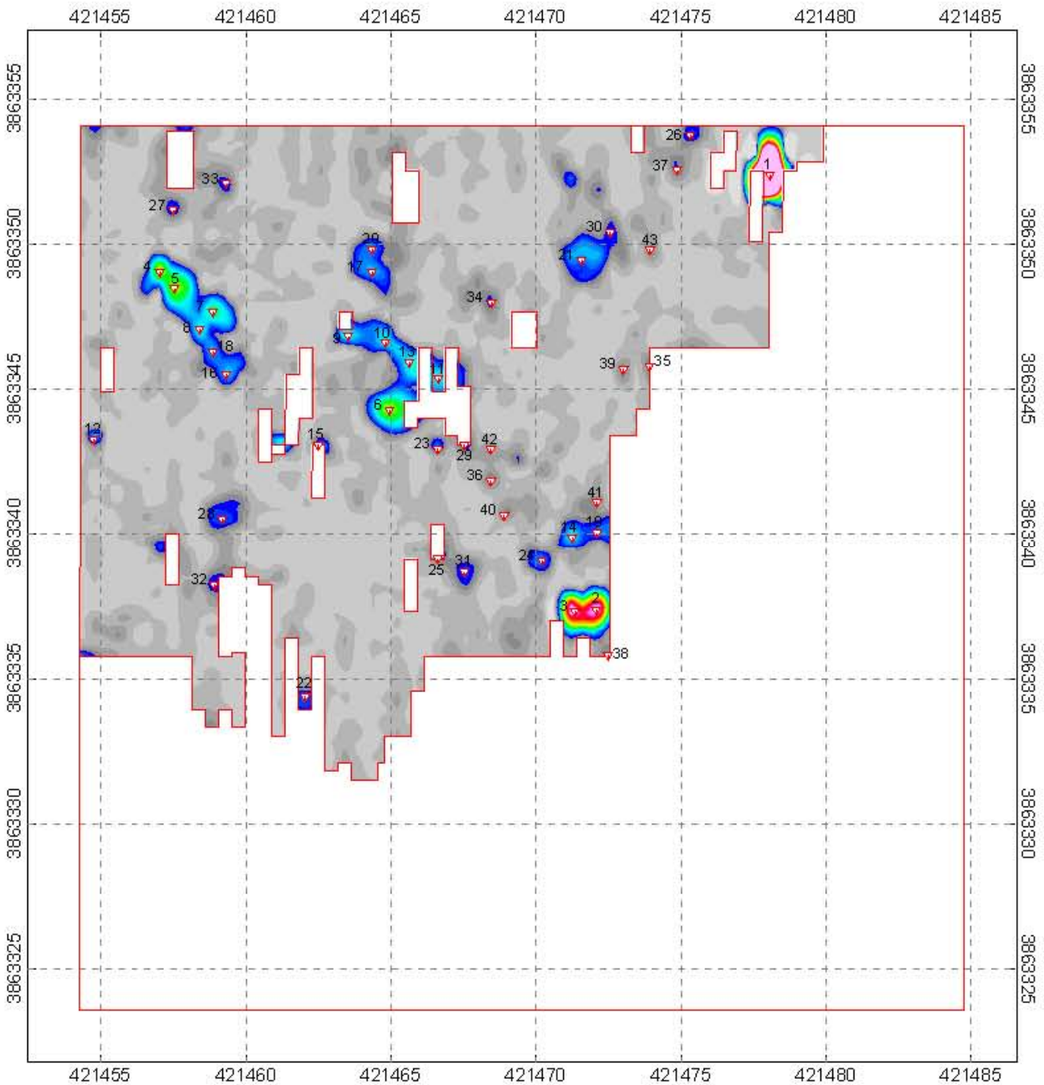
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: R20
Field Book ID:

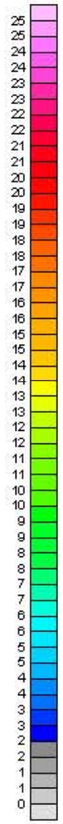
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
R-20_7	421464.7985	3863344.455	34.5	68.5	46.0		R-20_C6	11/28/04	121		0	0	01/08/05	CD		1.5	Nail/rock	6	0				2		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_70	421475.0101	3863347.35	68	78	6.0			11/28/04	7		0	12	01/08/05	CD			Rock - elec live wire						1		01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_71	421470.1315	3863340.799	52	56.5	6.0			11/28/04	9		-27.6	0	01/08/05	GEO			Rock						6		01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_73	421461.4461	3863345.826	23.5	73	5.0			11/28/04	5		-6	-6	01/08/05	CD		3	Wire/nail						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_74	421460.2257	3863341.561	19.5	59	5.0			11/28/04	11		0	-12	01/08/05	CD		2	Wire						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_75	421456.2261	3863353.982	6.367	99.7657	5.0			11/28/04	7		6	0	01/08/05	GEO			Rock	9	0						01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_76	421454.3122	3863346.225	0.0945	74.3091	4.0			11/28/04	3		3.6	-30	01/08/05	GEO			Rock						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_77	421463.2755	3863348.264	29.5	81	5.0			11/28/04	3		18	-6	01/08/05	GEO			Rock	-6	0			0			01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_78	421468.4558	3863343.084	46.5	64	5.0		R-20_C42	11/28/04	7		0	-24	01/08/05	GEO			Rock	0	-6				8		01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_8	421458.7912	3863338.256	14.7965	48.1535	33.0		R-20_C32	11/28/04	21		0	0	01/08/05	CD			18" wire/rock						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_81	421466.0201	3863353.291	38.5	97.5	5.0			11/28/04	5		6	12	01/08/05	CD			Wire	0	30				2		01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_82	421462.8174	3863344.76	28	69.5	5.0			11/28/04	3		6	0	01/08/05	GEO			Rock						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_9	421458.1271	3863347.588	12.6094	78.7831	35.0		R-20_C8	11/28/04	50		0	0	01/08/05	CD		12	Wire/rock						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_C30	421472.5725	3863350.397	60	88		3		11/28/04			0	0		CD	.25	12 x .25 x .25	wire, Rusted	0	0	NA	0	2	2	R20_C30 - #016	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
R-20_C34	421468.4571	3863347.959	46.5	80		3	R-20_32	11/28/04			0	0		CD	.25	4 x .25 x .25	nail, Rusted	0	0	NA	0	1	1	R20_C34 - #015	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
R-20_C35	421473.9255	3863345.799	64.4431	72.9108		2	R-20_30	11/28/04			0	0		CD	.25	24 x .25 x .25	wire, Rusted	0	0	NA	0	2	2	R20_C35 - #014	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
R-20_C7	421458.8558	3863347.655	15	79		8	R-20_5	11/28/04			0	0		NC			Rechecked still NC								1/26/06	rly	NA	DRA	02/22/06	NA	DRA	02/22/06

* 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)



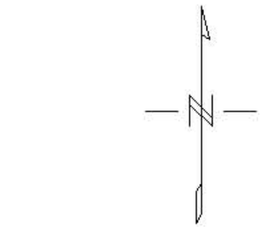


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

2.5 0 2.5 5 7.5 10

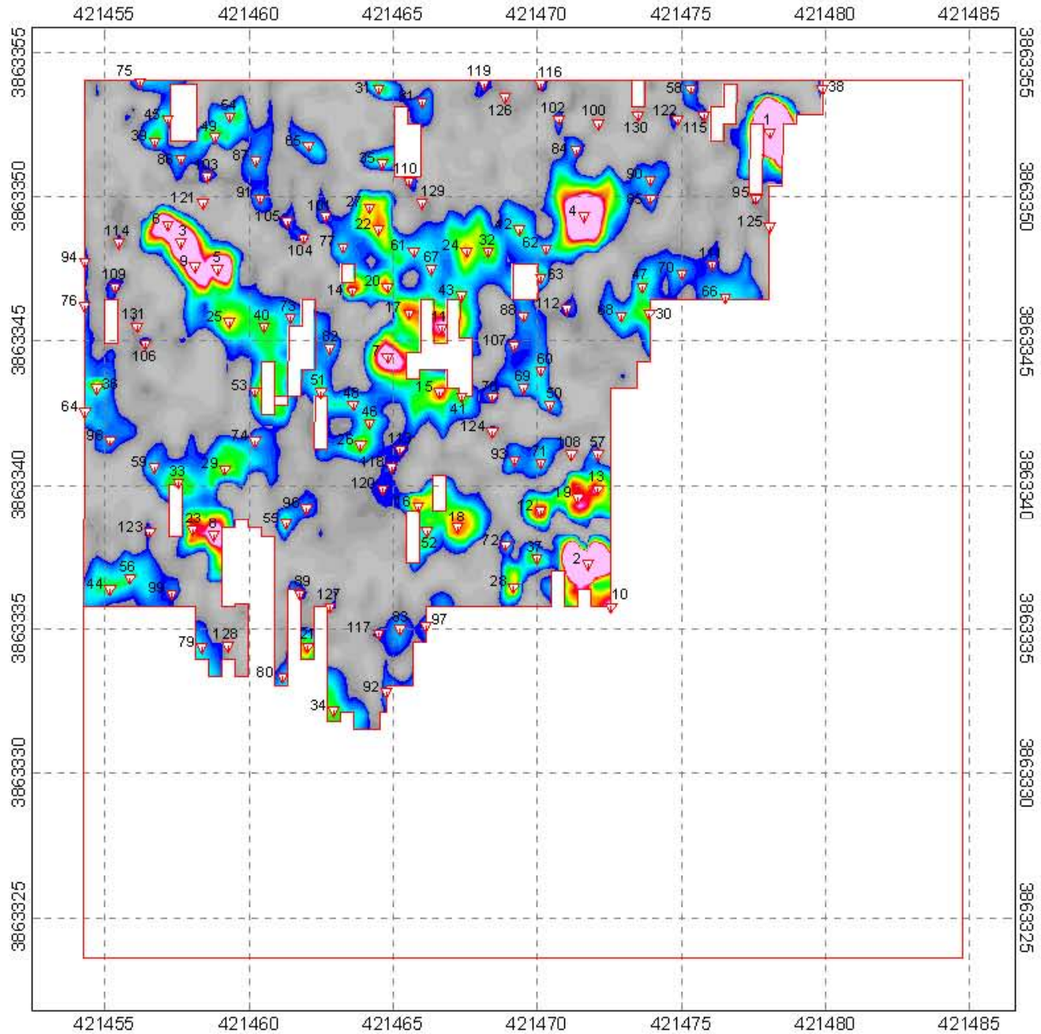
metres

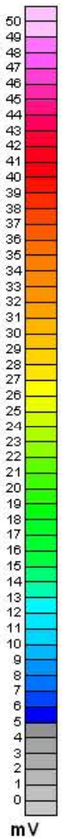
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid R-20
Camp Croft, South Carolina

Date of Survey: November 28, 2004



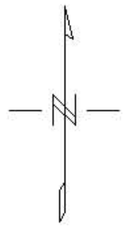


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

2.5 0 2.5 5 7.5 10

metres

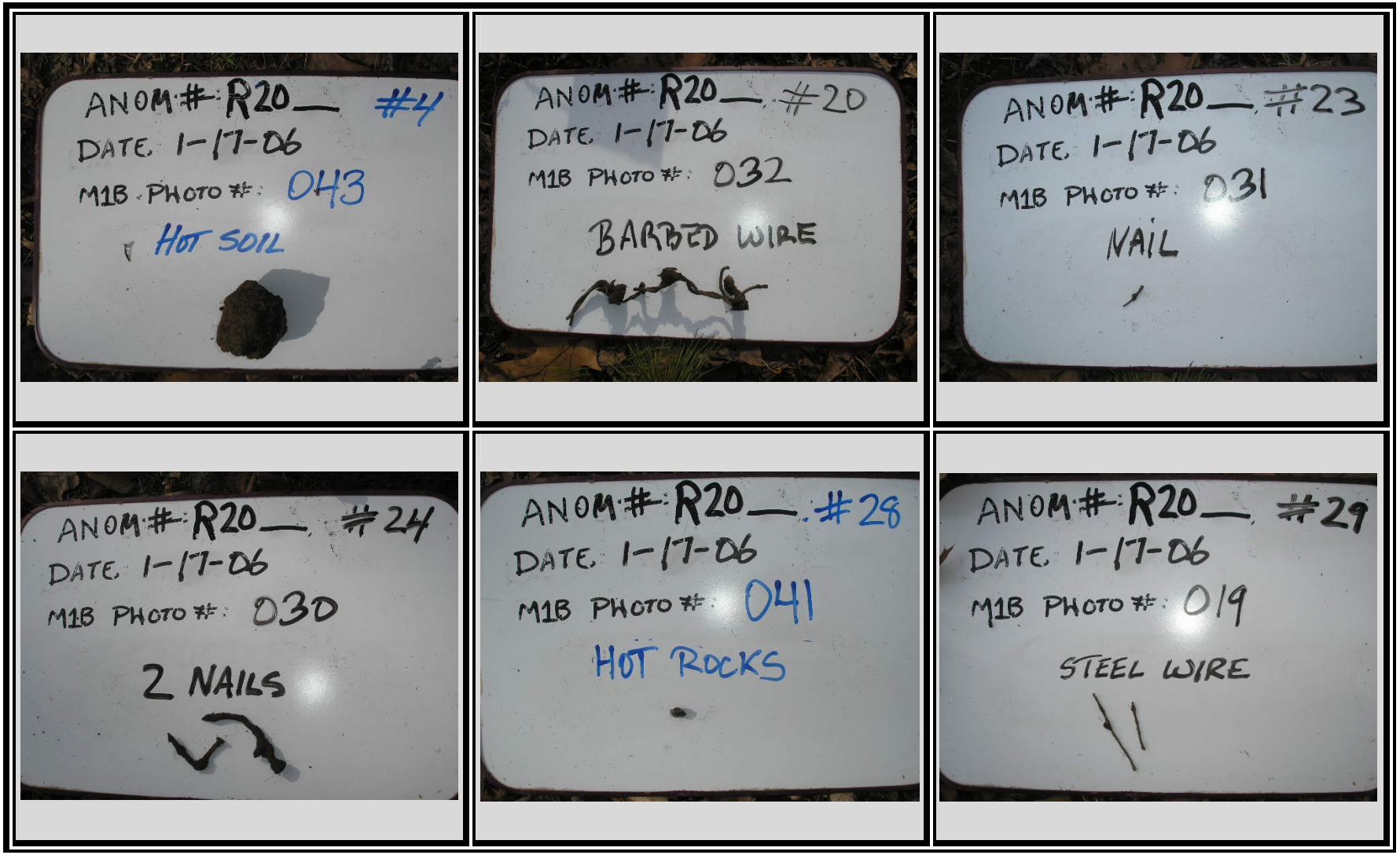
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid R-20
Camp Croft, South Carolina

Date(s) of Survey: November 28, 2004

GRID R20 DIG PHOTOS



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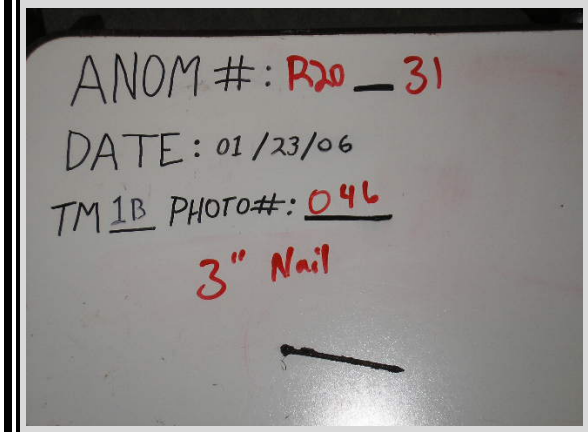

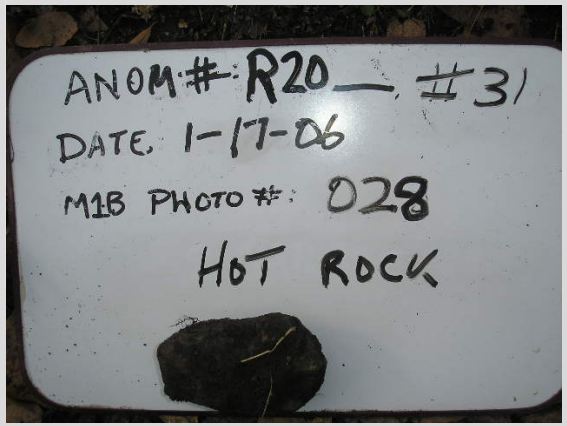

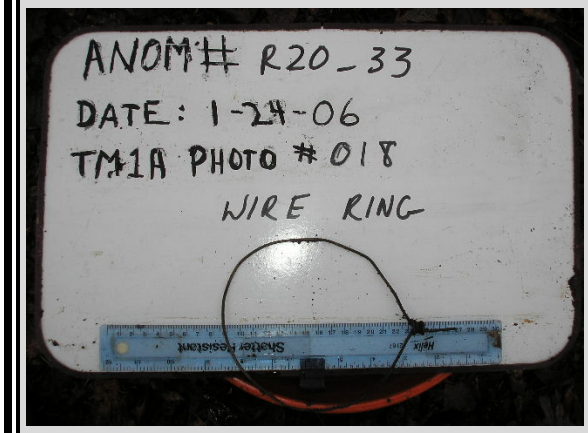

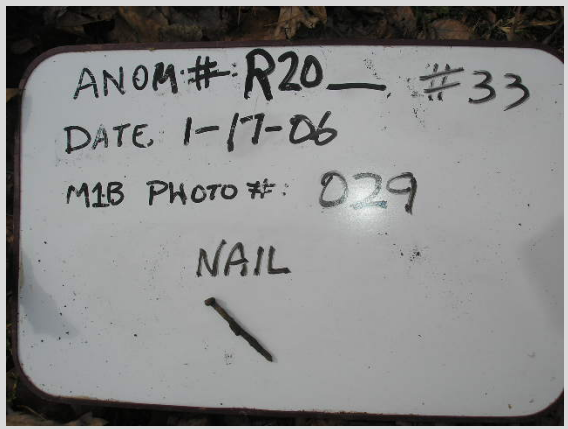

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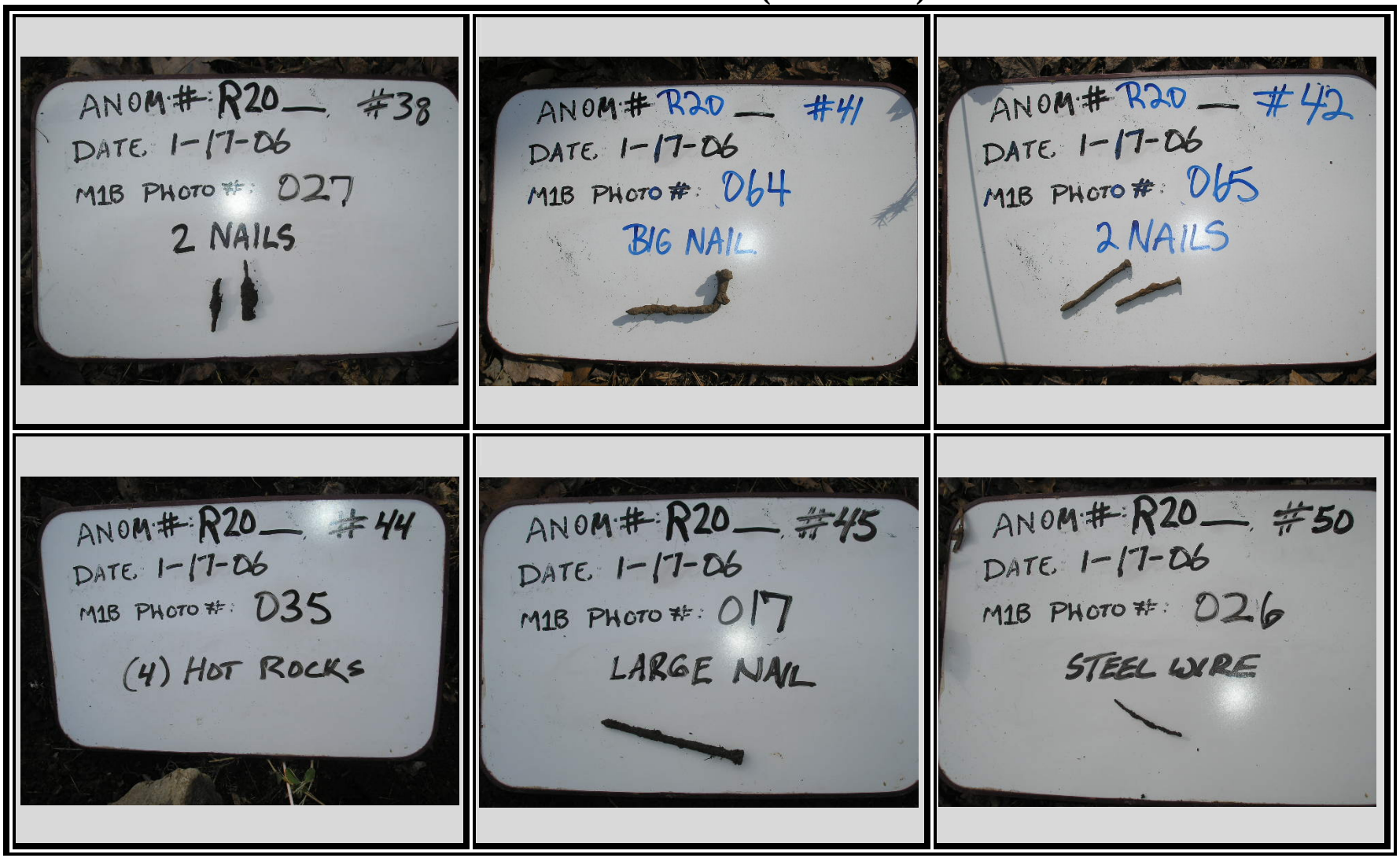

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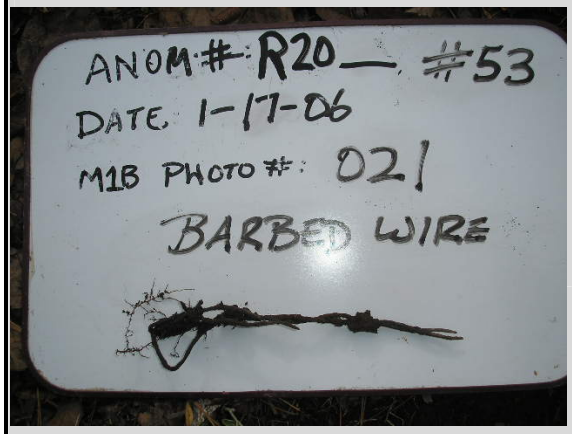

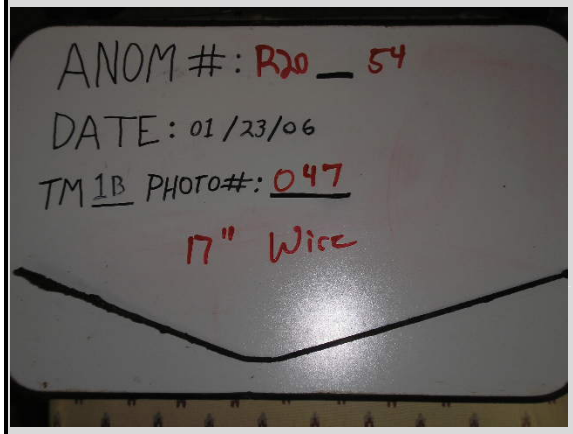

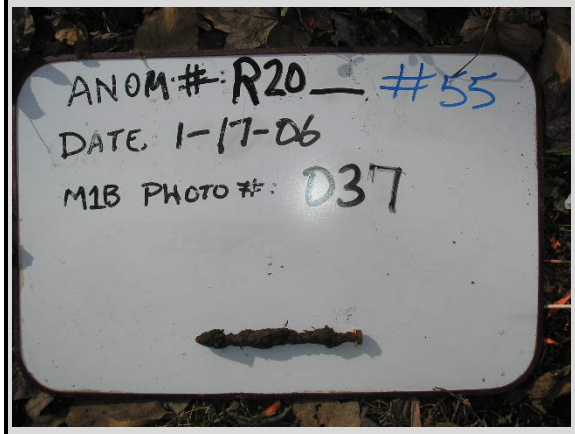

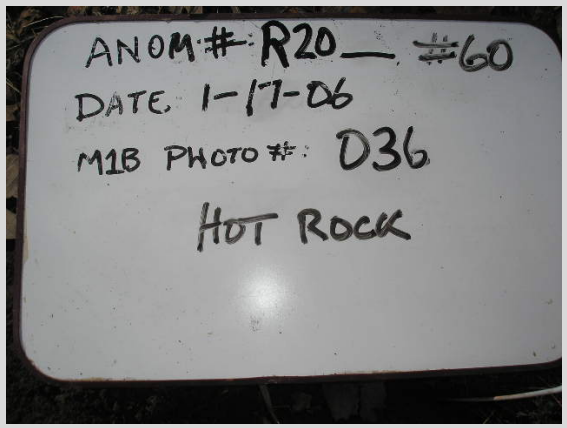

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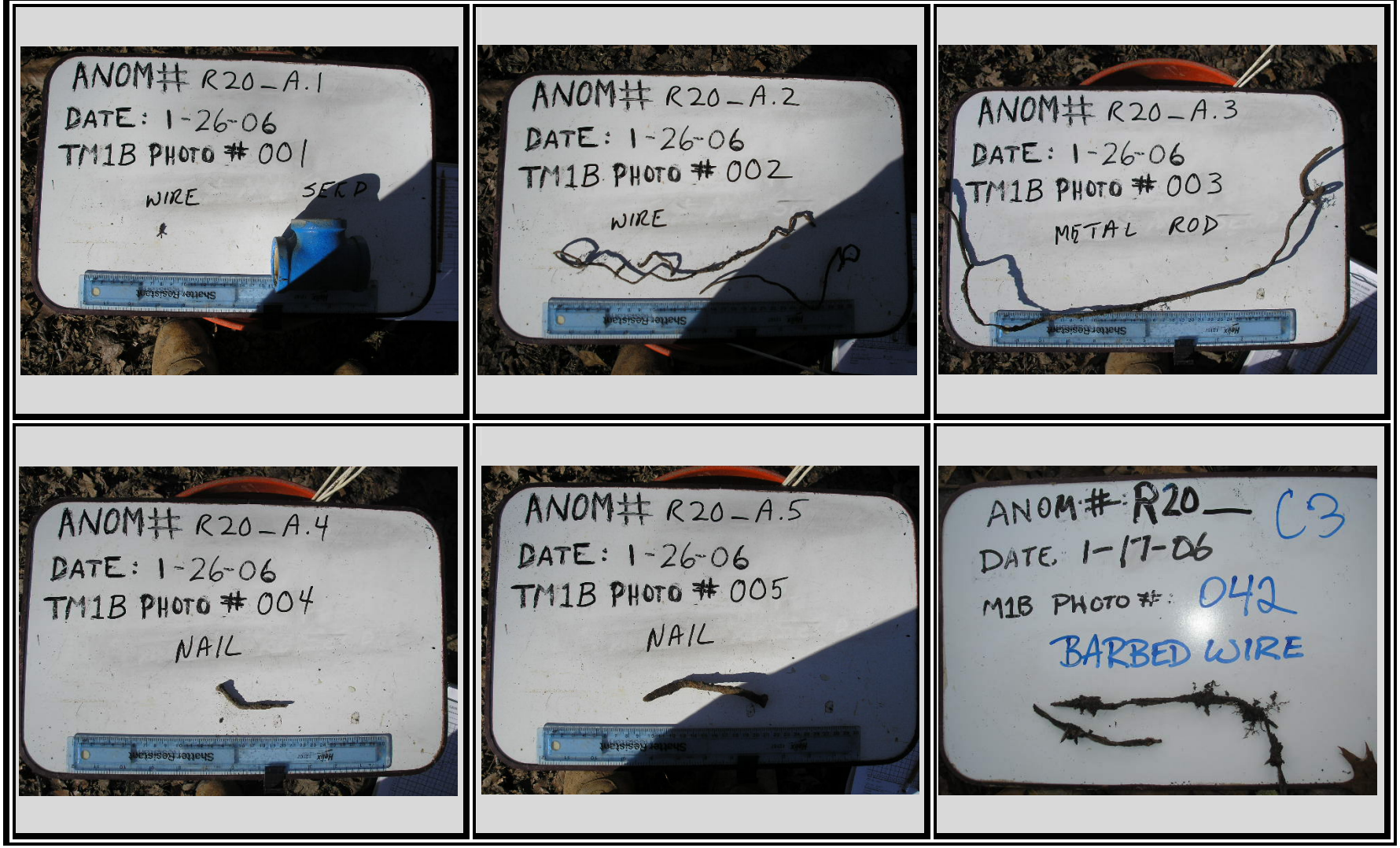

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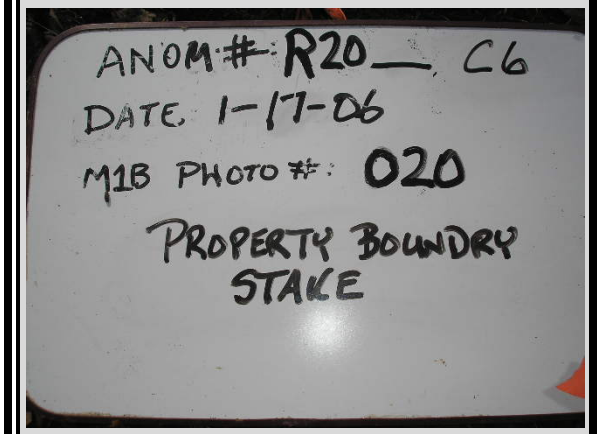

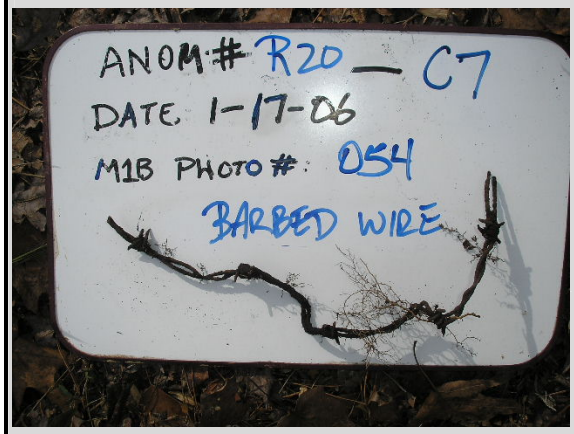

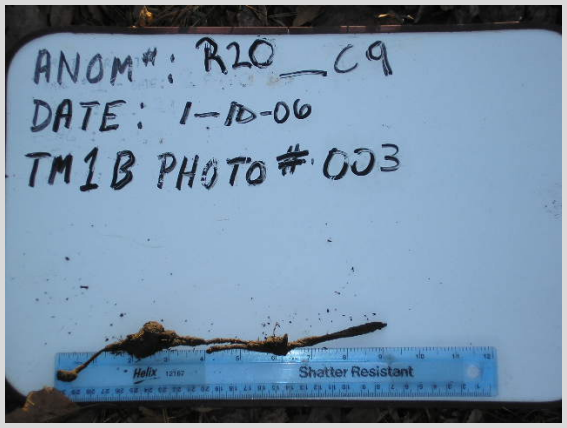

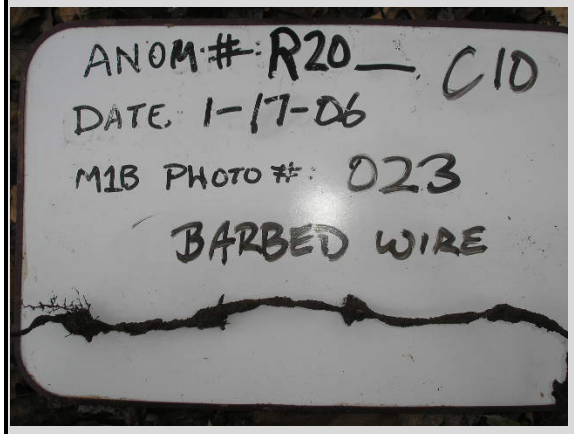

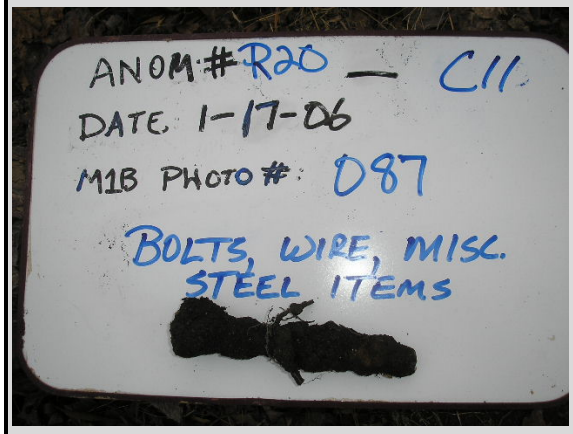

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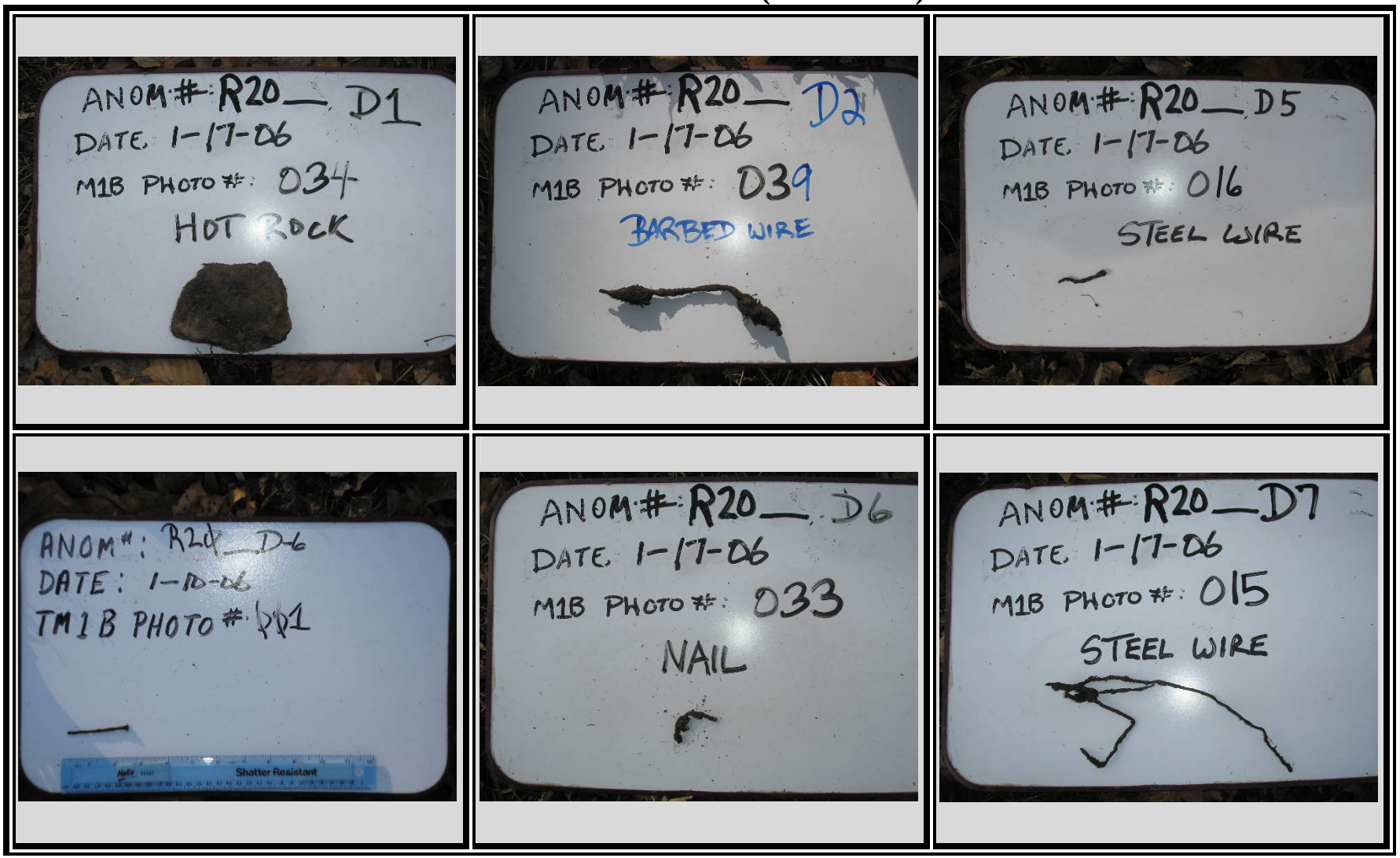
GRID R20 DIG PHOTOS (CONTINUED)



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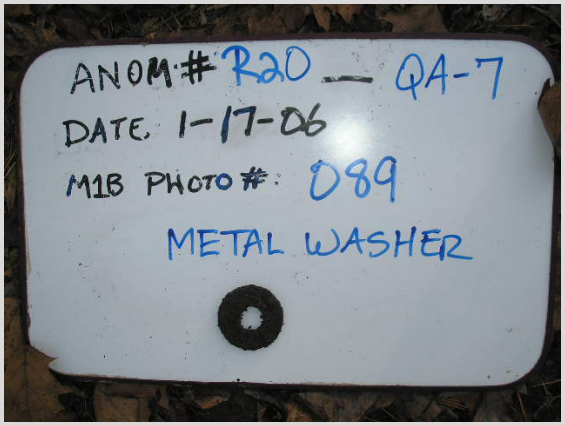
		

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

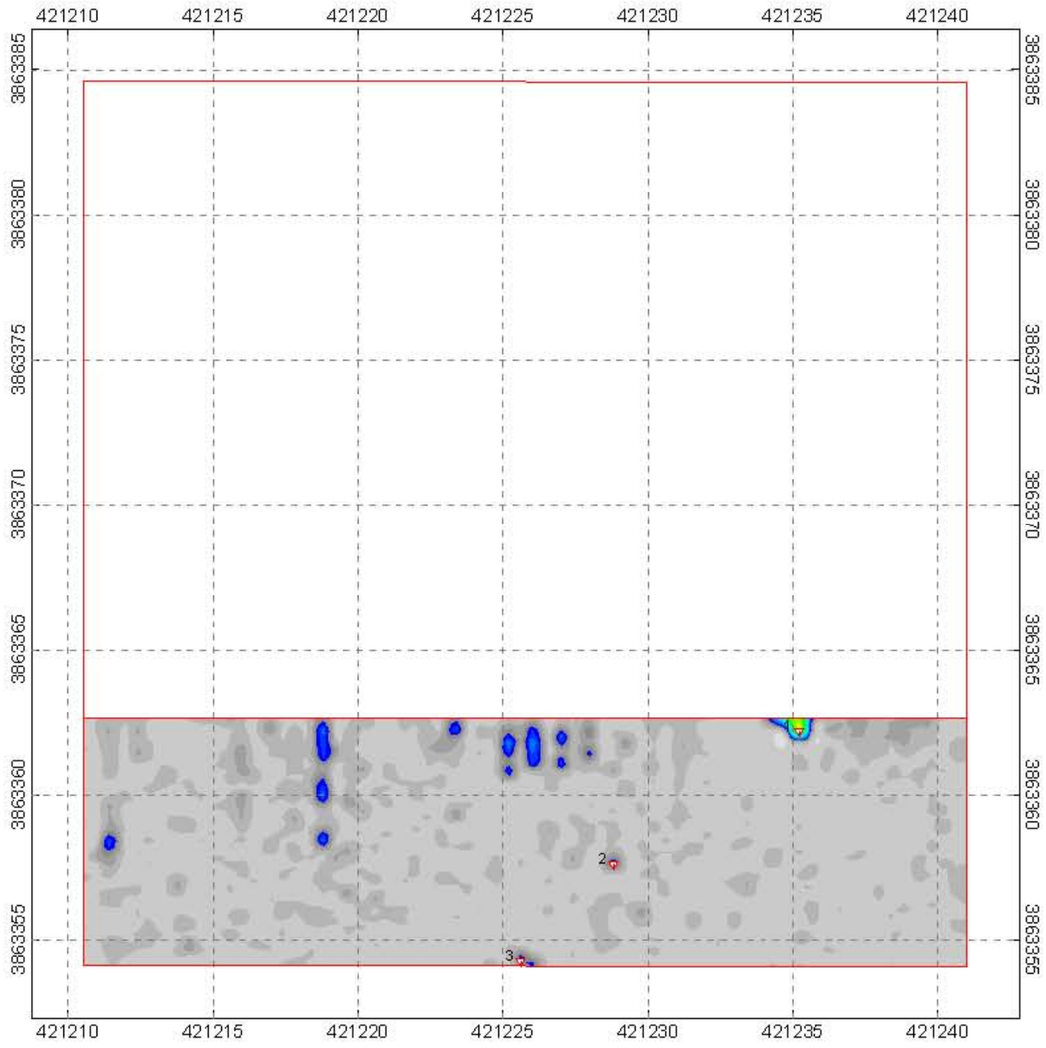
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: S12
Field Book ID:

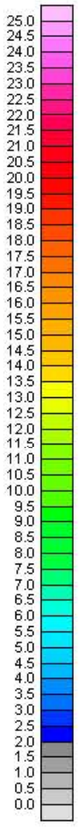
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	$Ch1^2$ Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	$Ch1^2$ Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs)	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
S-12_10	421239.3256	3863357.311	94.5	10.5	7.0			11/21/04	16		-12	0	01/10/05	CD	0.25	7	Wire	12	0			4	5		01/18/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005
S-12_18	421238.4109	3863355.026	91.5	3	5.0			11/21/04	3		0	0	01/10/05	NC			1 x 1 x 1 hole								01/18/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005
S-12_4	421240.2397	3863357.311	97.5	10.5	10.0			11/21/04	18		-18	-6	01/10/05	GEO			Rock					2	2		01/18/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005
S-12_4.1	421240.2397	3863357.311	97.5	10.5	10.0			11/21/04	18		-18	-6	01/10/05	CD			Wire	-12	0			2	2		01/18/05	RLF	Yes	HEL	01/25/05	YES	AJP	3/5/2005
S-12_8	421235.2115	3863354.265	81	0.5	8.0			11/21/04	3		0	0	01/10/05	GEO			Rock	12	0						01/18/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005

* 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)

N

Scale 1:180

2.5 0 2.5 5 7.5 10

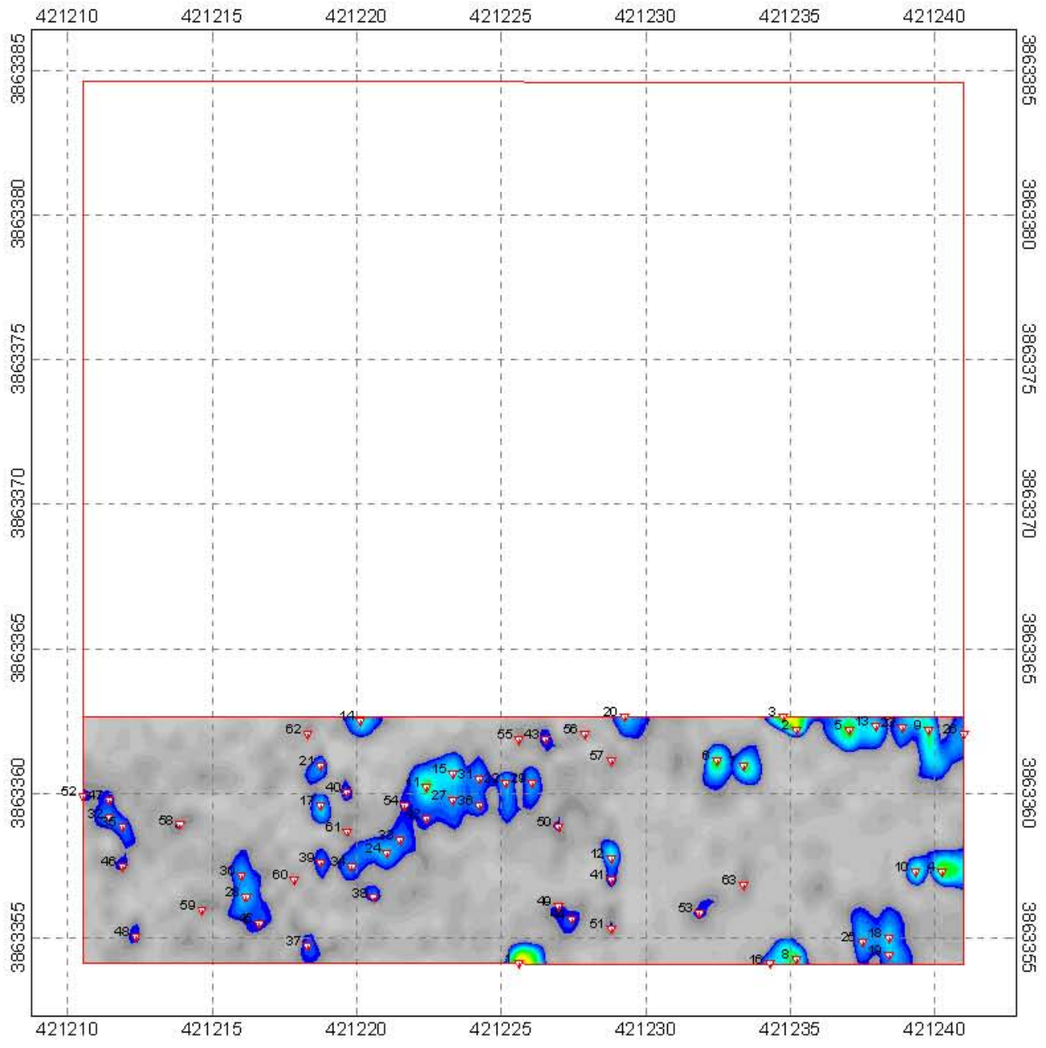
metres

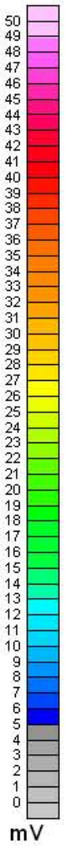
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid S-12
Camp Croft, South Carolina

Date of Survey: November 23, 2004





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)

Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

Selected Targets from EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid S-12
Camp Croft, South Carolina

Date of Survey: November 23, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

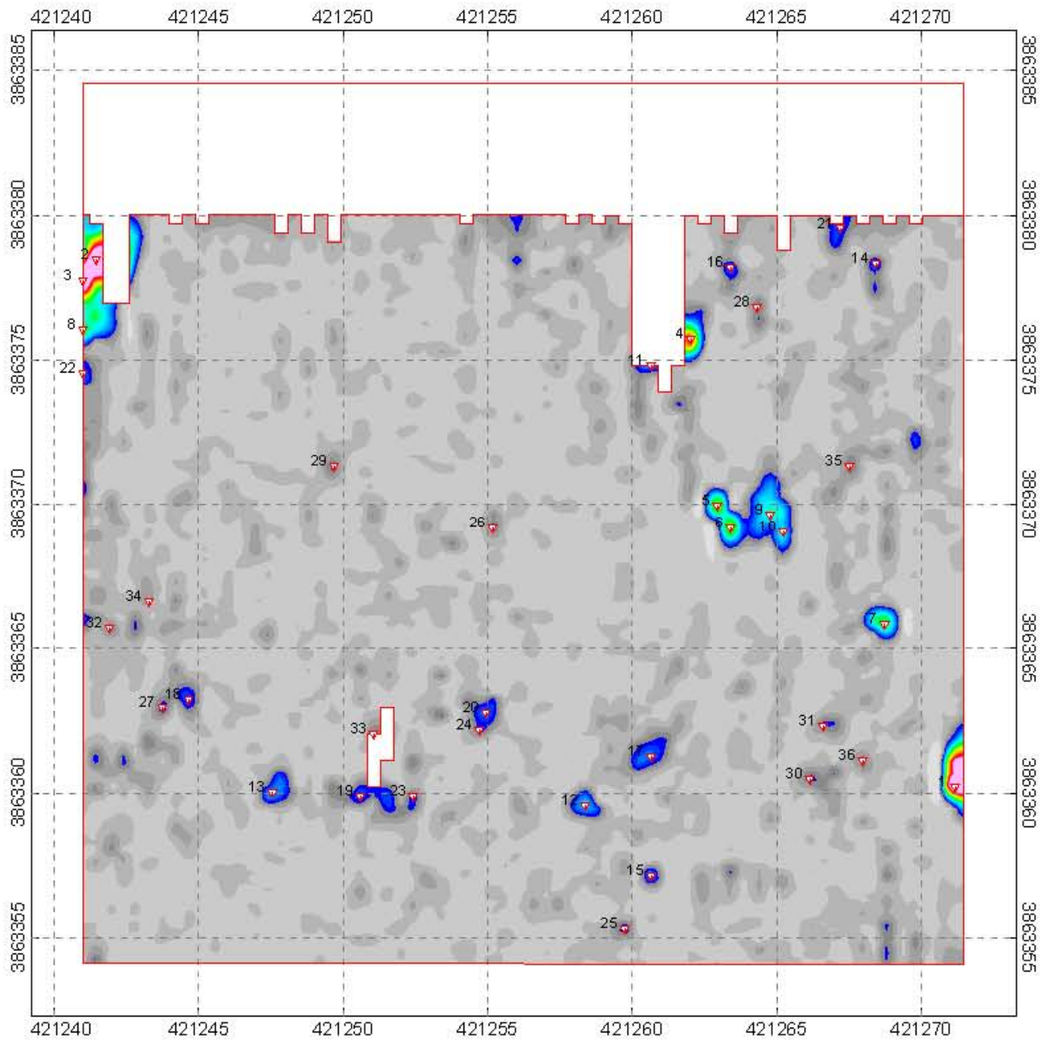
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: S13
Field Book ID:

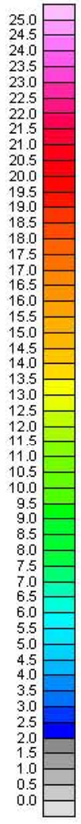
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
S-13_C10	421265.2277	3863369.035	79.5	49		6	S-13_8	11/23/04			0	0		CD		1 x 1	Metal	-12	0			1	1		01/24/05	RLF	Yes	HEL	01/25/05	YES	DRA	2/5/2005
S-13_C12	421258.3696	3863359.591	57	18		6	S-13_60	11/23/04			0	0		CD	0.25	1.5 x 1.5	Clevis pin	0	12			2	2		01/20/05	RLF	Yes	HEL	01/25/05	YES	DRA	2/5/2005
S-13_C13	421247.5531	3863360.051	21.5	19.5		4	S-13_34	11/23/04			0	0		CD	0.25	0.125 x 3 x 4	Metal					3	3		01/20/05	RLF	Yes	HEL	01/25/05	YES	DRA	2/5/2005
S-13_C14	421268.4295	3863378.327	90	79.5		3.8740606		11/23/04			0	0		CD		2 x 1	1" banding	-33.94625	-33.94625			0	0		01/24/05	RLF	Yes	HEL	01/25/05	YES	DRA	02/21/06
S-13_C15	421260.6541	3863357.153	64.5	10		4	S-13_54	11/23/04			0	0		CD			Cap to bottle									RLF	Yes	HEL	01/25/05	YES	DRA	02/21/06
S-13_C17	421260.6552	3863361.266	64.5	23.5		3	S-13_17	11/23/04			0	0		CD	0.5	36	1" banding - LIP					12	12		01/20/05	RLF	Yes	HEL	01/25/05	YES	DRA	2/5/2005
S-13_C18	421244.6594	3863363.251	12	30		3	S-13_84	11/23/04			0	0		CD	0.25	0.25 x 1 x 2	Metal	-8	0			0	0		01/20/05	RLF	Yes	HEL	01/25/05	YES	DRA	2/5/2005
S-13_C19	421250.6	3863359.898	31.5	19		3	S-13_56	11/23/04			0	0		CD		3 x 2	Metal					2	2		01/24/05	RLF	Yes	HEL	01/25/05	YES	DRA	2/5/2005
S-13_C2	421241.4642	3863378.486	1.5	80		47.575005		11/23/04			0	0		CD		1	1" banding - LIP								01/24/05	RLF	Yes	HEL	01/25/05	YES	DRA	02/21/06
S-13_C20	421254.9426	3863362.791	45.75	28.5		3	S-13_12	11/23/04			0	0		CD	0.25	0.25 x 2 x 3	Metal					0	0		01/20/05	RLF	Yes	HEL	01/25/05	YES	DRA	2/5/2005
S-13_C22	421241.0061	3863374.544	0	67.06		2.8795348		11/23/04			0	0		CD		1	1" banding					3	3+		01/24/05	RLF	Yes	HEL	01/25/05	YES	DRA	02/21/06
S-13_C23	421252.4281	3863359.897	37.5	19		3		11/23/04			0	0		CD		2 x 1.5	Bushing	0	-36			5	6		01/24/05	RLF	Yes	HEL	01/25/05	YES	AJP	3/5/2005
S-13_C24	421254.714	3863362.182	45	26.5		3	S-13_39	11/23/04			0	0		CD	.25	1 x .25 x .25	piece of steel, Rusted	0	0	NA	0	1	1	S13_C24 - #001	1/18/06	bam	YES	TF	01/26/06	YES	RVW	01/25/06
S-13_C26	421255.1729	3863369.189	46.5	49.5		3		11/23/04			0	0		NC			2 x 2 x 1 hole								01/24/05	RLF	Yes	HEL	01/25/05	YES	ALJ	3/5/2005
S-13_C27	421243.7452	3863362.946	9	29		2	S-13_42	11/23/04			0	0		NC			2 x 2 x 1 hole								01/24/05	RLF	Yes	HEL	01/25/05	YES	ALJ	3/5/2005
S-13_C28	421264.3157	3863376.804	76.5	74.5		2.4643643		11/23/04			0	0		CD	0.25	1 x 1.5	Metal					1	1		01/24/05	RLF	Yes	HEL	01/25/05	YES	DRA	02/21/06
S-13_C3	421240.8546	3863377.725	0	77.5		39.266006		11/23/04			0	0		CD			1" banding - LIP					12	12+		01/24/05	RLF	Yes	HEL	01/25/05	YES	DRA	02/21/06
S-13_C30	421266.1395	3863360.503	82.5	21		2	S-13_23	11/23/04			0	0		CD	1	3 x 1 x 1	Metal	12	0			0	0		01/24/05	RLF	Yes	HEL	01/25/05	YES	DRA	2/5/2005
S-13_C31	421266.597	3863362.331	84	27		2	S-13_232	11/23/04			0	0		CD	0.25	2 x 1	Metal					0	0		01/24/05	RLF	Yes	HEL	01/25/05	YES	DRA	2/5/2005
S-13_C32	421241.9178	3863365.689	3	38		2.1806853		11/23/04			0	0		NC			2 x 2 x 1 hole								01/24/05	RLF	Yes	HEL	01/25/05	NA	DRA	02/21/06
S-13_C33	421251.0576	3863362.03	33	26		2	S-13_29	11/23/04			0	0		CD		4	Wire	0	36			3	3		01/24/05	RLF	Yes	HEL	01/25/05	YES	DRA	2/5/2005
S-13_C34	421243.2892	3863366.603	7.5	41		2.0755801		11/23/04			0	0		NC			2 x 2 x 1 hole								01/24/05	RLF	Yes	HEL	01/25/05	NA	DRA	02/21/06
S-13_C35	421267.5135	3863371.319	87	56.5		2	S-13_27	11/23/04			0	0		CD	0.25	1.5 x 3	Metal					2	2		01/24/05	RLF	Yes	HEL	01/25/05	YES	DRA	2/5/2005
S-13_C36	421267.9678	3863361.112	88.5	23		2	S-13_64	11/23/04			0	0		CD			Bottle cap	-12	0			0	0		01/24/05	RLF	Yes	HEL	01/25/05	YES	DRA	2/5/2005
S-13_C4	421241.01	3863377.72	69	71		24.58255		11/23/04			0	0		CD			Fence post in tree - LIP								01/24/05	RLF	Yes	HEL	01/25/05	YES	DRA	02/21/06
S-13_C5	421262.9428	3863369.949	72	52		13	S-13_18	11/23/04			0	0		CD			Asphalt	24	0			3	3		01/24/05	RLF	Yes	HEL	01/25/05	YES	DRA	02/21/06
S-13_C6	421263.3996	3863369.187	73.5	49.5		13	S-13_19	11/23/04			0	0		CD	0.5	2 x 2 x 2	Metal	24	0			5	6		01/24/05	RLF	Yes	HEL	01/25/05	YES	DRA	2/5/2005
S-13_C7	421268.7308	3863365.834	91	38.5		9	S-13_21	11/23/04			0	0		NC			2 x 2 x 1 hole								01/20/05	RLF	Yes	HEL	01/25/05	NA	DRA	02/21/06
S-13_C8	421241.0065	3863376.049	0	72		8.3154545		11/23/04			0	0		CD		1	1" banding - LIP					6	6+		01/24/05	RLF	Yes	HEL	01/25/05	YES	DRA	02/21/06
S-13_C9	421264.7708	3863369.644	78	51		8	S-13_4	11/23/04			0	0		CD	0.5	0.125 x 9 x 2	Broken hoe	0	-24			4	4		01/20/05	RLF	Yes	HEL	01/25/05	YES	DRA	2/5/2005

* 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)



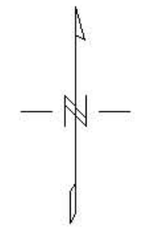


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

2.5 0 2.5 5 7.5 10

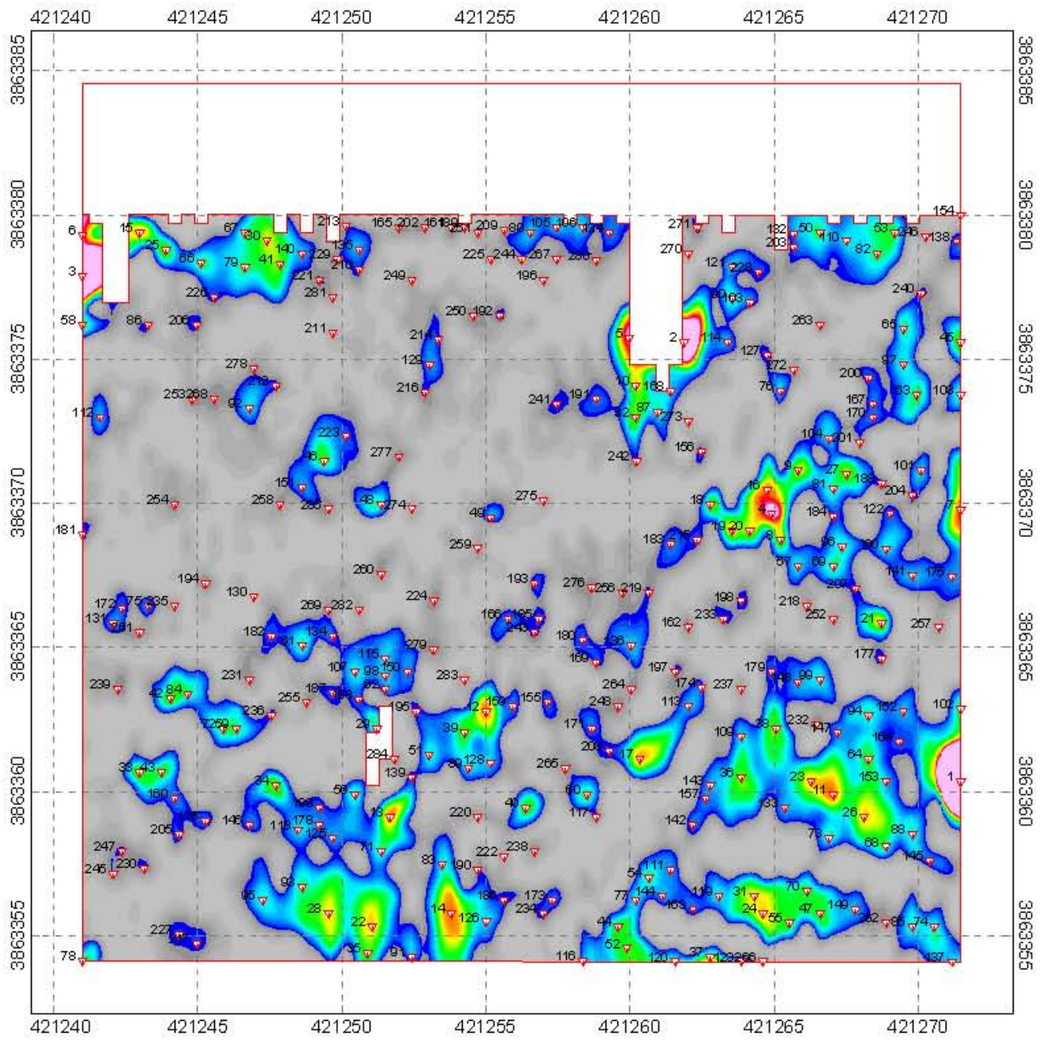
metres

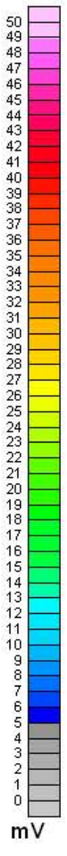
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid S-13
Camp Croft, South Carolina

Date of Survey: November 23, 2004





NAEVA GEOPHYSICS INC.
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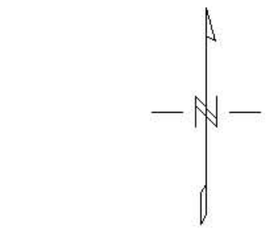
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

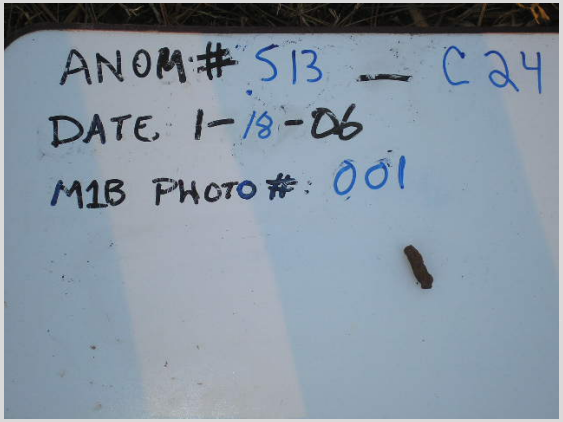
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid S-13
Camp Croft, South Carolina

Date of Survey: November 23, 2004

GRID S13 DIG PHOTOS

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

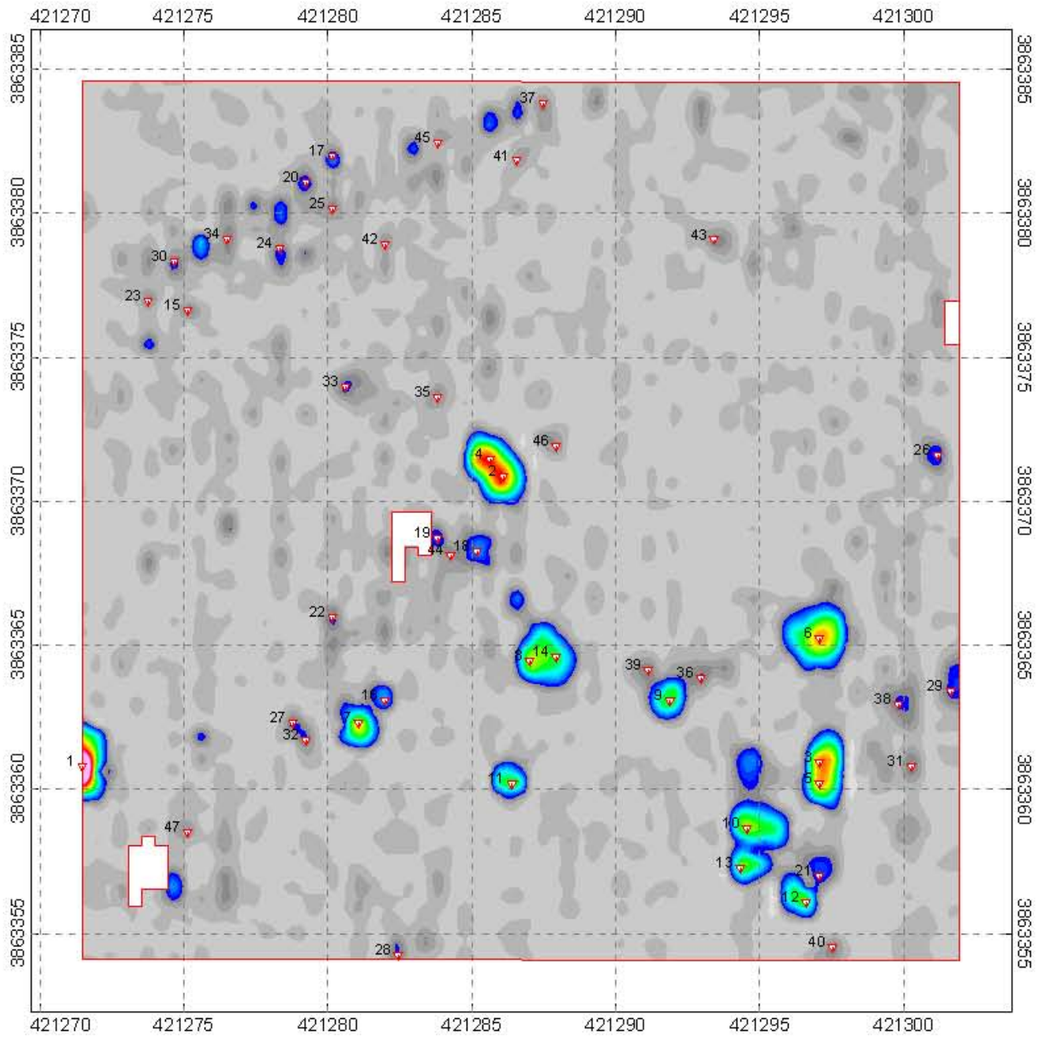
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: S14
Field Book ID:

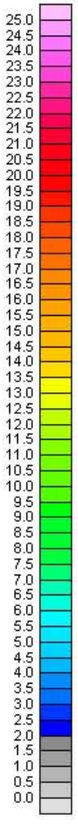
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
S-14_C10	421294.5515	3863358.667	75.75	15		13		11/22/04			0	0		CD	1	18	1/2" rebar	16	0			1	1		01/24/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C11	421286.4014	3863360.193	49	20		11	S-14_19	11/22/04			0	0		CD			Golf spike	-12	0			1	1		01/24/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C12	421296.6075	3863356.076	82.5	6.5		11	S-14_48	11/22/04			0	0		GEO			Hot dirt - 2 x 2 x 1 hole								01/24/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C13	421294.3227	3863357.296	75	10.5		11		11/22/04			0	0		CD	13		Metal gear	0	-18			12	14		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C14	421287.9261	3863364.61	54	34.5		9	S-14_4	11/22/04			0	0		CD	2.5		Plow blade - Shared with C8	-8.486563	8.4865629			3	5		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C15	421275.1323	3863376.649	12	74		6	S-14_94	11/22/04			0	0		CD		1 x 0.2	3/8 bolt	12	0			0	0		01/24/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C16	421281.9842	3863363.088	34.5	29.5		5	S-14_9	11/22/04			0	0		CD			Bottle cap					0	0		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C2	421286.0996	3863370.857	48	55		25	S-14_2	11/22/04			0	0		CD		24 x 0.5	1/2 Rebar - Shared with C4	-12.72984	12.729844			0	0		01/24/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C21	421297.0648	3863356.99	84	9.5		4	S-14_13	11/22/04			0	0		CD	2	2 x 2 x 2	Metal					4	4		01/24/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C22	421280.1568	3863365.984	28.5	39		3		11/22/04			0	0		NC			2 x 2 x 1 hole								01/25/05	RLF	Yes	HEL	01/26/05	NA	DRA	02/21/06
S-14_C23	421273.7612	3863376.954	7.5	75		3	S-14_32	11/22/04			0	0		GEO			Hot dirt - 1 1/2 x 1 1/2 x 2 hole - Geo confirmed during QC					24	24		01/25/05	RLF	Yes	HEL	01/24/05	YES	DRA	2/5/2005
S-14_C24	421278.3321	3863378.781	22.5	81		3	S-14_30	11/22/04			0	0		GEO			Hot dirt - 1 x 1 x 1								01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C25	421280.1606	3863380.152	28.5	85.5		3		11/22/04			0	0		GEO			Hot dirt - 1 x 1 x 1								01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C26	421301.1821	3863371.615	97.5	57.5		3	S-14_22	11/22/04			0	0		CD		0.5 x 0.5 x 3	Bar					1	1		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C29	421301.6369	3863363.387	99	30.5		3	S-14_47	11/22/04			0	0		CD	0.25	3 x 4	Metal					8	8		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C3	421297.0659	3863360.951	84	22.5		22	S-14_3	11/22/04			0	0		CD	1	24	1/2 Rebar - Shared with C5					1	1		01/24/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C30	421274.6757	3863378.325	10.5	79.5		3	S-14_132	11/22/04			0	0		GEO			Hot dirt - 1 1/2 x 1 1/2 x 2								01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C31	421300.2651	3863360.798	94.5	22		3	S-14_26	11/22/04			0	0		CD	0.5		Railroad spike					12	13		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C32	421279.2416	3863361.718	25.5	25		3		11/22/04			0	0		CD			Rusty broken can - LIP	-8	0			8	10		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C33	421280.616	3863373.979	30	65.24		3	S-14_16	11/22/04			0	0		CD	1	2 x 1	Roller					3	4		01/24/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C34	421276.504	3863379.086	16.5	82		3	S-14_36	11/22/04			0	0		GEO			Hot dirt								01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C35	421283.8152	3863373.6	40.5	64		2	S-14_158	11/22/04			0	0		NC			2 x 2 x 1 - Geo confirmed during QC								01/25/05	RLF	Yes	HEL	01/24/05	YES	ALJ	3/5/2005
S-14_C36	421292.9533	3863363.847	70.5	32		2	S-14_18	11/22/04			0	0		CD			Wire - Shared with C39/C9	-16.97313	16.973126						01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C38	421299.8086	3863362.931	93	29		2		11/22/04			0	0		GEO			Hot dirt - 1 x 1 x 2								01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C39	421291.1252	3863364.152	64.5	33		2		11/22/04			0	0		CD			Wire - Shared with C9/C36	18	0			14	14		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C4	421285.6428	3863371.466	46.5	57		22	S-14_2	11/22/04			0	0		CD	1	24 x 0.5	1/2 Rebar - Shared with C2	-12	0			0	0		01/24/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C40	421297.5212	3863354.552	85.5	1.5		2	S-14_92	11/22/04			0	0		CD			Wire - LIP					6	6		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C42	421281.9885	3863378.932	34.5	81.5		2	S-14_41	11/22/04			0	0		CD			1" banding - LIP	-42	0						01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C43	421293.4144	3863379.082	72	82		2	S-14_60	11/22/04			0	0		CD	0.25	3 x 4	Metal	-12.72984	12.729844			0	0		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C44	421284.2707	3863368.115	42	46		2	S-14_12	11/22/04			0	0		CD		0.375 x 2 x 4	Metal - Shared with C18/C19	12	0						01/24/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C46	421287.9281	3863371.923	54	58.5		2		11/22/04			0	0		CD		1	Nail	0	-18						01/24/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C5	421297.0657	3863360.189	84	20		19	S-14_3	11/22/04			0	0		CD		24	1/2 Rebar - Shared with C3					1	1		01/24/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C6	421297.067	3863365.217	84	36.5		17	S-14_6	11/22/04			0	0		CD			1" banding - LIP					8	10		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C7	421281.0699	3863362.327	31.5	27		17	S-14_7	11/22/04			0	0		CD		12	Wire					3	4		01/24/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C8	421287.012	3863364.458	51	34		14		11/22/04			0	0		CD	2.5		Plow blade - Shared with C14	12	0			3	5		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C9	421291.8867	3863363.086	67	29.5		13	S-14_11	11/22/04			0	0		CD			Wire	0	0			14	14		01/24/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-14_C9.1	421291.8867	3863363.086	67	29.5		13		11/22/04			0	0		CD			1/2 band - Shared with C39/C36	0	0			14	14		01/24/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005

* 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)

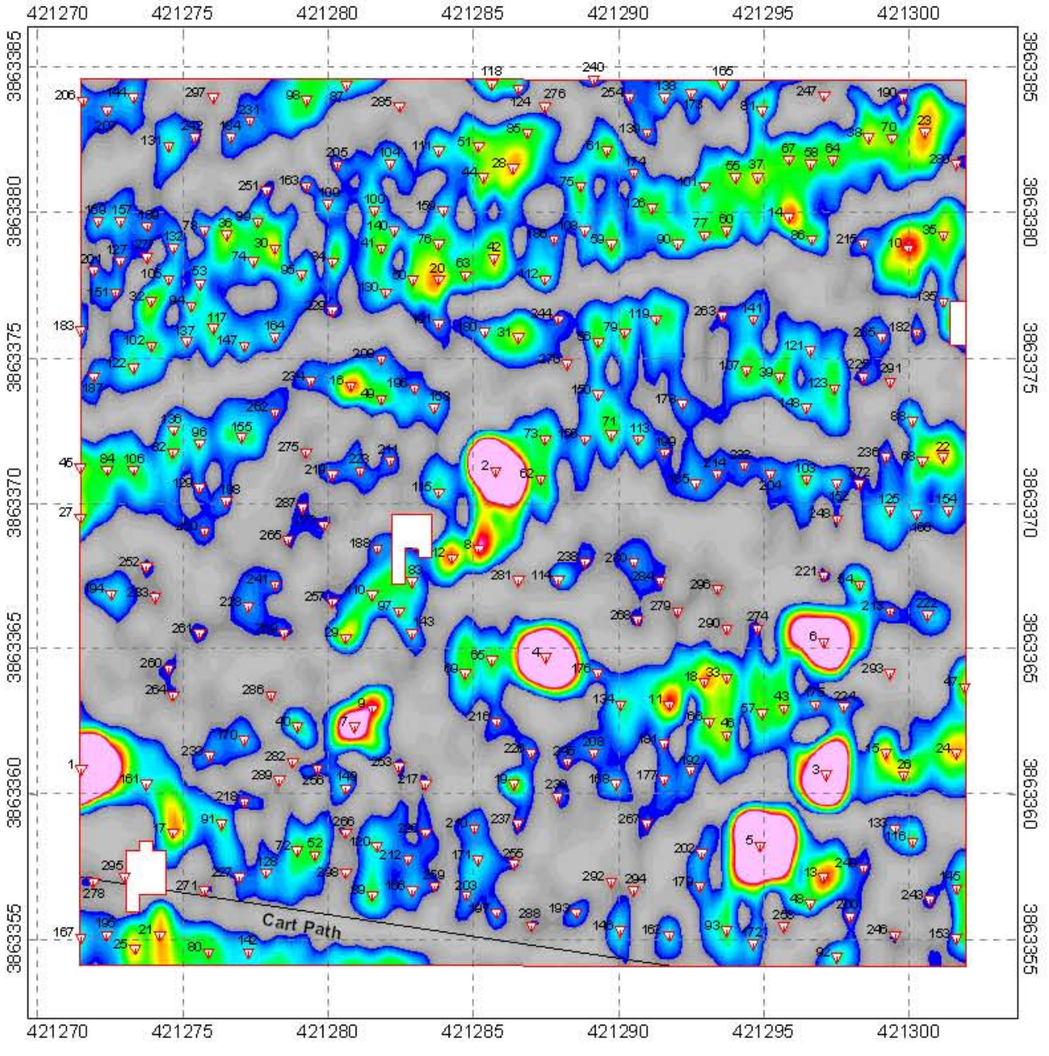
Scale 1:180

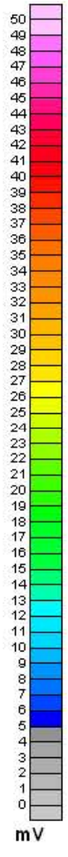
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid S-14
Camp Croft, South Carolina

Date of Survey: November 22, 2004





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)

Scale 1:180

2.5 0 2.5 5 7.5 10

metres

NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid S-14
Camp Croft, South Carolina

Date(s) of Survey: November 22, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: S15
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
S-15_C1	421322.3601	3863378.465	67	80		16	S-15_11	11/20/04			0	0		CD	3	120 x 1	1" banding - area 4' around flag - Shared with C18					0	16		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C10	421309.2572	3863374.507	24	67		4	S-15_8	11/20/04			0	0		CD		12	Wire - Shared with C8	8.4865629	8.4865629			1	1		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C11	421322.5091	3863365.896	67.5	38.75		4	S-15_118	11/20/04			0	0		MD	0.25		M15 top	0	-42			1	1		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C12	421319.613	3863360.488	58	21		4	S-15_278	11/20/04			0	0		CD	0.25	5 x 4	Metal	-12	0			2	2		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C13	421312.3053	3863378.924	34	81.5		4	S-15_7	11/20/04			0	0		CD			Burn pit - Shared with C16/C49/C31								01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C14	421322.2023	3863358.355	66.5	14		4	S-15_75	11/20/04			0	0		CD	0.25	4 x 3	Metal	-12	0			0	0		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C15	421327.5395	3863377.245	84	76		4	S-15_80	11/20/04			0	0		CD	0.25	24 x 0.1	1/8" rod - Shared with C22	6	0			0	0		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C16	421311.315	3863378.468	30.75	80		4		11/20/04			0	0		CD			Burn pit - Shared with C31/C49/C13					1	4		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C17	421310.1714	3863374.964	27	68.5		4	S-15_1	11/20/04			0	0		CD	0.5	6	Railroad	24	0			1	2		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C18	421321.1412	3863378.008	63	78.5		4	S-15_30	11/20/04			0	0		CD		120	1" banding	24	0			0	16		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C19	421328.4534	3863376.33	87	73		4	S-15_252	11/20/04			0	0		CD			Beer can					0	0		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C2	421318.395	3863363.383	54	30.5		14	S-15_14	11/20/04			0	0		CD			Aluminum can					0	0		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C20	421303.1611	3863366.129	4	39.5		4	S-15_46	11/20/04			0	0		CD		8	Wire					3	3		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C21	421323.8028	3863361.553	71.75	24.5		4	S-15_13	11/20/04			0	0		MD	0.25		M15 top					1	1		01/25/05	RLF	Yes	HEL	01/24/05	YES	DRA	2/5/2005
S-15_C22	421328.4537	3863377.701	87	77.5		3		11/20/04			0	0		CD		24 x 0.1	1/8" metal - Shared with C15	-6	0			0	0		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C23	421317.631	3863355.004	51.5	3		3	S-15_226	11/20/04			0	0		CD	0.25	0.5 x 1 x 1	Metal	0	-12			1	1		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C24	421321.5955	3863367.8	64.5	45		3	S-15_68	11/20/04			0	0		GEO			Hot dirt/rotten fence post - 1 1/2 x 1 1/2 x 2								01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C25	421310.1716	3863375.573	27	70.5		3		11/20/04			0	0		CD	0.25	0.5 x 0.5 x 8	Bar	-12	0			2	2		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C26	421311.544	3863380.448	31.5	86.5		3		11/20/04			0	0		CD	0.5	x x 1.5	Metal	-12	0			3	3		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C27	421313.3708	3863375.42	37.5	70		3	S-15_2	11/20/04			0	0		CD	0.25		Nail and trash - Shared with C45/C47					0	0		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C28	421325.2519	3863368.104	76.5	46		3	S-15_119	11/20/04			0	0		GEO			Hot dirt - 2 x 2 x 1 - Geo confirmed during QC								01/25/05	RLF	Yes	HEL	01/24/05	YES	DRA	2/5/2005
S-15_C29	421309.7138	3863372.679	25.5	61		3	S-15_298	11/20/04			0	0		CD		1 x 1.5	Metal	-30	0			1	1		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C3	421316.113	3863375.267	46.5	69.5		9	S-15_54	11/20/04			0	0		MD	0.25		M15 top	15.558699	-15.5587			3	4		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C30	421307.8855	3863372.146	19.5	59.25		3	S-15_41	11/20/04			0	0		CD		2	Fence stapple					1	1		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C31	421310.6296	3863379.077	28.5	82		3	S-15_12	11/20/04			0	0		CD			Burn pit - Shared with C13/C16/C49	0	12			1	4		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C32	421311.5446	3863382.733	31.5	94		3	S-15_101	11/20/04			0	0		GEO			Hot dirt - 2 x 2 x 2 hole								01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C33	421306.9678	3863358.968	16.5	16		3	S-15_77	11/20/04			0	0		CD		2.5	Nail	0	-12			2	2		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C34	421326.164	3863360.791	79.5	22		3	S-15_183	11/20/04			0	0		MD	0.25		M15 top	-18	0			4	5		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C35	421314.2837	3863371.002	40.5	55.5		3	S-15_193	11/20/04			0	0		GEO			Hot dirt - 2 x 2 x 2 hole								01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C36	421317.9362	3863356.832	52.5	9		3	S-15_43	11/20/04			0	0		CD			40 oz bud lite cap					0	0		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C37	421315.1965	3863366.126	43.5	39.5		3	S-15_124	11/20/04			0	0		CD	0.25		Metal/nail	-6	0			1	1		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C38	421313.3707	3863374.811	37.5	68		3	S-15_2	11/20/04			0	0		CD			Nail pit - Shared with C27					1	1		01/25/05	RLF	Yes	HEL	01/26/05	YES	DRA	2/5/2005
S-15_C4	421306.9742	3863382.43	16.5	93		8	S-15_70	11/20/04			0	0		CD	.25	.5 x 3 x .5	aluminum beer can, Deformed	0	0	NA	0	3	4	S15_C4 - #002	1/18/06	bam	Yes	TF	01/26/06	YES	RVW	01/26/06
S-15_C4	421306.9742	3863382.43	16.5	93		8	S-15_70	11/20/04			0	0		NC			No contact confirmed during QC								01/25/05	RLF	Yes	HEL	01/24/05	NO	DSW	
S-15_C40	421329.8254	3863379.834	91.5	84.5		3		11/20/04			0	0		GEO			Hot dirt - 2 x 2 x 1 hole								01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-15_C41	421316.1093	3863361.555	46.5	24.5		3	S-15_264	11/20/04			0	0		CD		2	Nail	-24	0			0	0		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-15_C42	421317.0268	3863374.2	49.5	66		3	S-15_36	11/20/04			0	0		CD		3	Nail (2)					2	2		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-15_C43	421306.0603	3863383.344	13.5	96		3		11/20/04			0	0		GEO			Hot dirt - 2 x 2 x 1 hole - Geo confirmed during QC								01/25/05	RLF	Yes	HEL	01/24/05	YES	DRA	2/5/2005
S-15_C44	421319.4629	3863368.715	57.5	48		3	S-15_10	11/20/04			0	0		CD			Bail, can parts					1	3		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-15_C45	421312.4567	3863375.268	34.5	69.5		3	S-15_9	11/20/04			0	0		CD	0.5	6	Railroad spikes - Shared with C2	-12	0			1	1		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

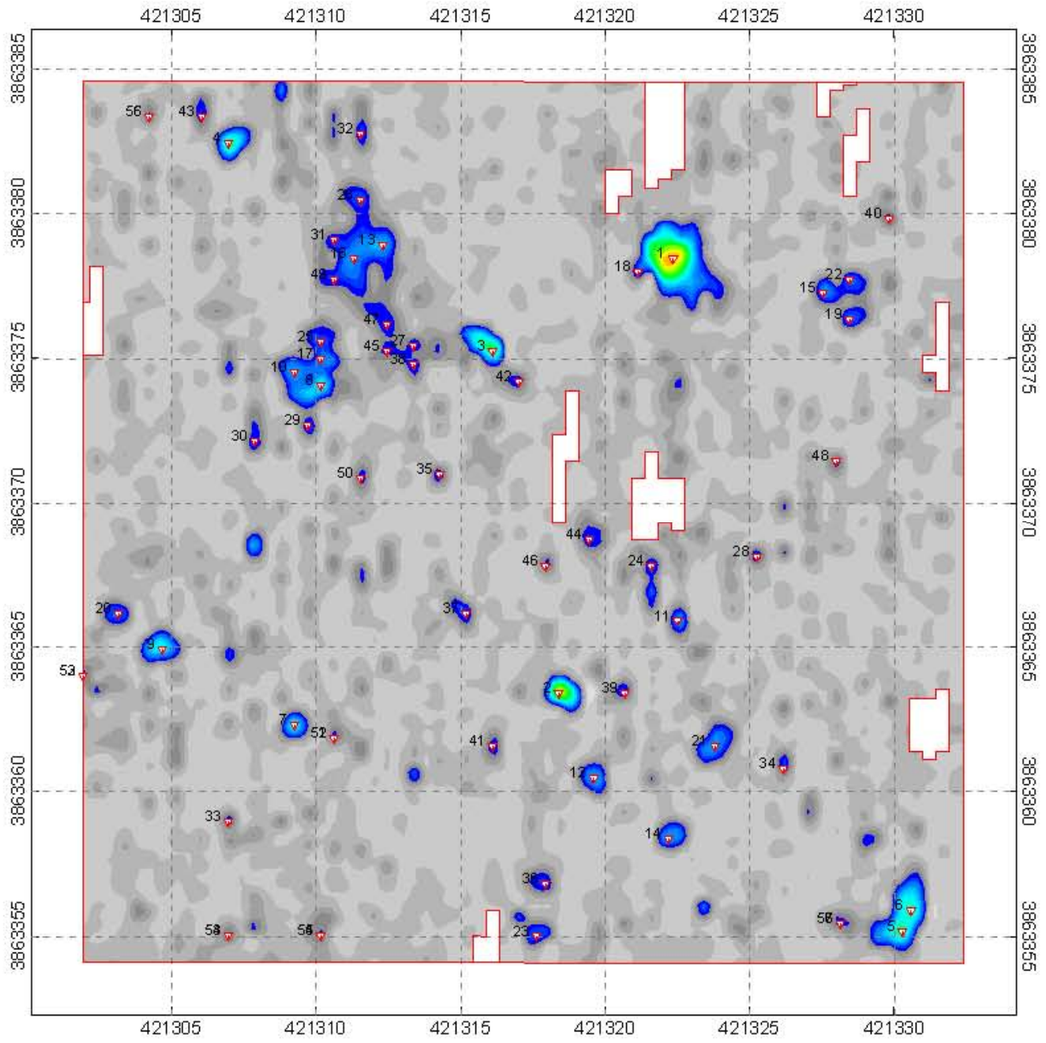
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: S15
Field Book ID:

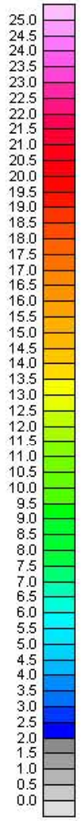
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	Chi^2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs)	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
S-15_C46	421317.9392	3863367.801	52.5	45		3	S-15_161	11/20/04			0	0		GEO			Hot dirt - 2 x 2 x 1 hole								01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-15_C47	421312.457	3863376.182	34.5	72.5		3		11/20/04			0	0		CD			Nails and trash - Shared with C22/C45	0	-12			1	1		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-15_C48	421327.995	3863371.455	85.5	57		3	S-15_104	11/20/04			0	0		GEO			Hot dirt - 2 x 2 x 1 hole - Geo confirmed during QC								01/25/05	RLF	Yes	HEL	01/24/05	YES	DRA	2/5/2005
S-15_C49	421310.6292	3863377.706	28.5	77.5		3		11/20/04			0	0		CD			Burn pit - Shared with C13/C16/C31					1	6		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-15_C5	421330.2758	3863355.153	93	3.5		8	S-15_4	11/20/04			0	0		CD		18	Barb wire	-18	0			3	3		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-15_C50	421311.5414	3863370.85	31.5	55		3	S-15_322	11/20/04			0	0		CD		1.5	Washer/nail					0	0		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-15_C51	421310.6249	3863361.862	28.5	25.5		2	S-15_55	11/20/04			0	0		CD	0.25		Spray paint can	18	0			2	2		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-15_C52	421301.9418	3863363.997	0	32.5		2	S-14_47	11/20/04			0	0		GEO			Hot dirt - 2 x 2 x 1 hole					12	12		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-15_C53	421306.9668	3863355.007	16.5	3		2	S-15_26	11/20/04			0	0		CD	0.5	2 x 1	Wheel					4	5		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-15_C54	421310.1661	3863355.006	27	3		2	S-15_34	11/20/04			0	0		MD	0.5		M15 top	0	12			2	2		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-15_C54.1	421310.1661	3863355.006	27	3		2		11/20/04			0	0		CD	0.5		baring case					2	2		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-15_C55	421304.2322	3863383.345	7.5	96		2		11/20/04			0	0		GEO			Hot dirt - 2 x 2 x 1 hole - Geo confirmed during QC								01/25/05	RLF	Yes	HEL	01/24/05	YES	DRA	2/5/2005
S-15_C56	421328.1431	3863355.458	86	4.5		2	S-15_81	11/20/04			0	0		CD		9	Barb wire					3	3		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-15_C6	421330.5807	3863355.915	94	6		7	S-15_4	11/20/04			0	0		CD		24	Barb wire	-18	0			3	3		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-15_C7	421309.2539	3863362.319	24	27		7	S-15_29	11/20/04			0	0		CD		1 x 1.5	Metal					3	3		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-15_C8	421310.1712	3863374.05	27	65.5		7		11/20/04			0	0		CD	0.25	12	Wire - Shared with C10	-12.72984	12.729844			1	1		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-15_C9	421304.6842	3863364.91	9	35.5		6	S-15_103	11/20/04			0	0		CD			Aluminum can					5	5		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005

* 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

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

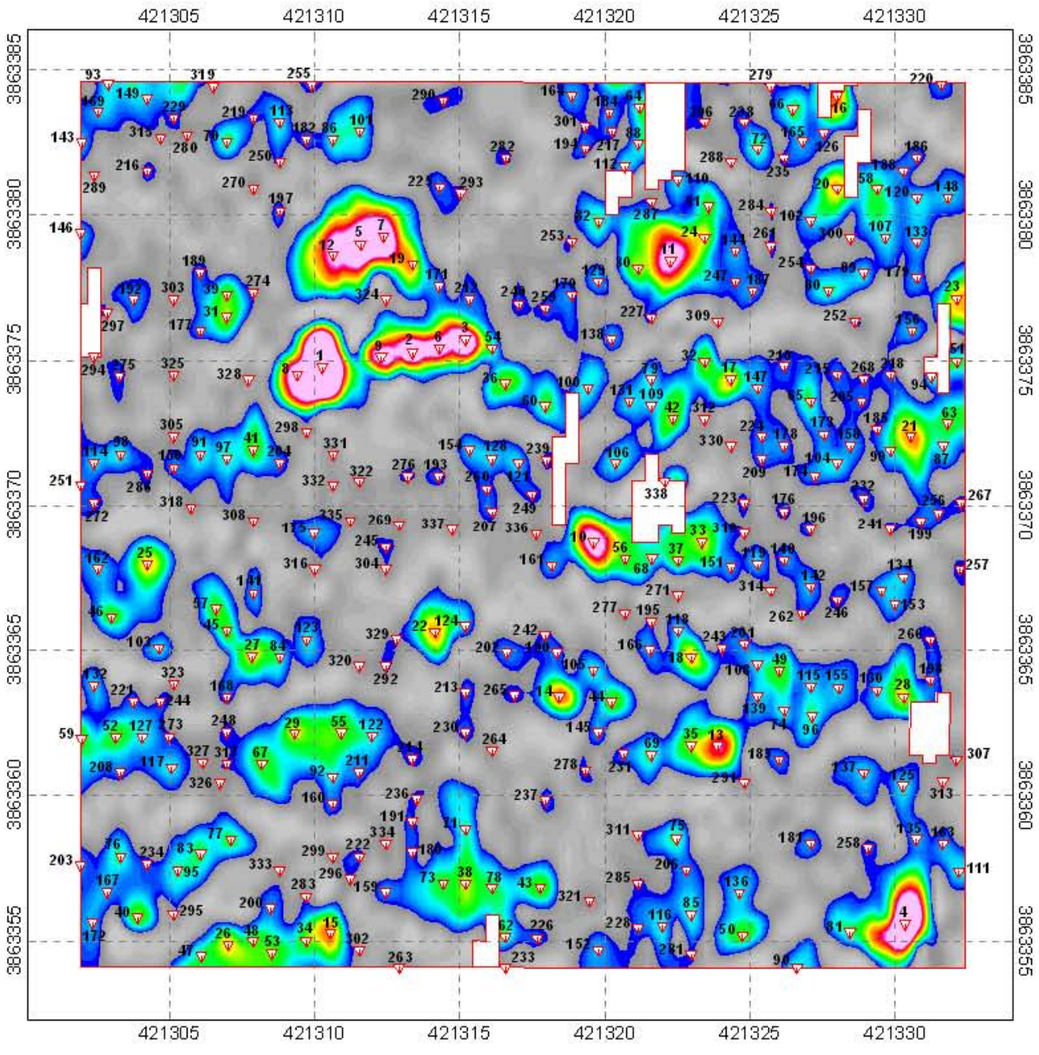
Scale 1:180

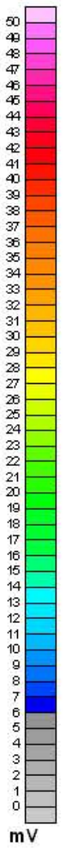
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid S-15
Camp Croft, South Carolina

Date of Survey: November 20, 2004



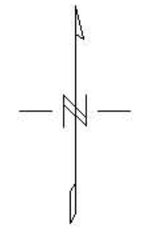


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

2.5 0 2.5 5 7.5 10

metres

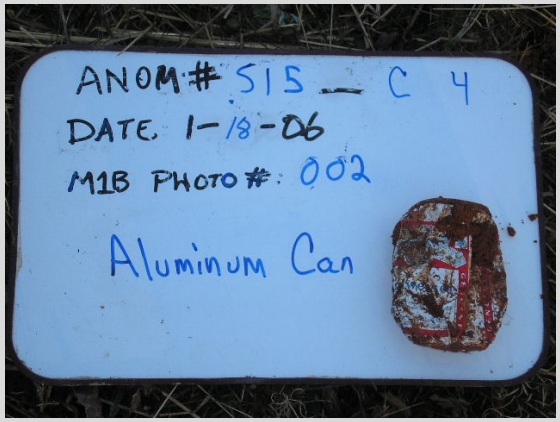
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid S-15
Camp Croft, South Carolina

Date(s) of Survey: November 20, 2004

GRID S15 DIG PHOTOS



ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: S16
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
S-16_1	421350	3863383.75	57.7093	97.3718	99.0		S-16_C2	11/20/04	145		-6	-6	01/13/05	MD	8	1 x 1 x 6	M15 W.P. - Grenade pieces (11) - multiple fuzes, grenade expended - S16-1 Burn Pit					1	1.5		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_10	421348	3863383.5	51.1455	96.5493	22.0		S-16_C21	11/20/04	50		-6	-12	01/13/05	MD	0.5	3.5 x 1	M15 grenade fuze - fuze top of grenade					2	2.5		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_105	421336	3863368.5	11.7749	47.3088	5.0			11/20/04	7		0	0	01/12/05	GEO	15	1 x 1 x 1	Geo soil					3	9		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_11	421362.571	3863373.781	98.9761	64.6643	16.0			11/20/04	26		0	0	01/13/05	CD	1	5 x 2 x 0.25	Metal plate	9.9009901	9.9009901			8	8		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_126	421336.0503	3863364.022	11.9438	32.6126	4.0			11/20/04	15		0	0	01/12/05	GEO			Geo soil					0	1		01/13/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_14	421349.85	3863355.8	57.2417	5.6403	18.0			11/20/04	23		0	0	01/13/05	CD	1.5	4 x 3	Metal slag								02/04/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_165	421338.75	3863383.75	20.7869	97.3609	3.0			11/20/04	5		-12	-6	01/12/05	GEO	15	1 x 1 x 1	Geo soil					0	6		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_18	421342.5	3863354.5	33.1202	1.3674	15.0		S-16_C10	11/20/04	46		-6	-6	01/13/05	CD	0.25	3 x 3	#6 wood w/screws					3	4		01/13/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_19	421347.9548	3863380.197	51	85.71	13.0			11/20/04	22		-6	-6	01/13/05	CD	0.5	4 x 0.125	3 ea nails	-8	0			4	4		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_199	421333.75	3863384	4.3767	98.1765	3.0			11/20/04	5		0	0	01/12/05	GEO	15	1 x 1 x 1	Geo soil					0	6		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_2	421352	3863363	64.2916	29.2725	80.0		S-16_C5	11/20/04	33		0	0	01/13/05	CD	2.5	4 x 2	Mechanical part	0	-8			2.5	3		01/13/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_20	421335.2019	3863380.791	9.1447	87.6457	12.0			11/20/04	20		0	-12	01/13/05	GEO	0.25	1 x 1	Geo rock	19.80198	19.80198			3	3		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_21	421338.6	3863354.1	20.3208	0.0513	21.0		S-16_C3	11/20/04	41		0	0	01/13/05	CD	0.25	2.5	Aluminum can pieces	4.2432815	4.2432815			3	4		01/13/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_212	421332.8716	3863376.829	1.5	74.64	2.0			11/20/04	9		12	-6	01/12/05	GEO	15	1 x 1 x 1	Geo soil					0	6		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_214	421337.5	3863382.25	16.6857	92.4368	3.0			11/20/04	6		-8.4	-18	01/12/05	GEO	15	1 x 1 x 1	Geo soil					0	6		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_22	421351.75	3863358.75	63.4749	15.3238	15.0		S-16_C20	11/20/04	22		0	14.4	01/13/05	CD	1	10	Chain	0	-6			4	4		01/13/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_24	421357	3863383.25	80.6837	95.7375	20.0		S-16_C4	11/20/04	42		0	0	01/13/05	CD	0.25	5 x 3	Crushed can					3	3		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_25	421334.25	3863379.75	6.0214	84.2289	12.0			11/20/04	18		-6	-6	01/13/05	GEO	1.5	1 x 1 x 1	Geo soil					0	6		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_26	421356.75	3863363.5	79.8806	30.9177	16.0		S-16_C8	11/20/04	20		-12	-6	01/13/05	GEO			Geo soil								01/13/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_27	421350.75	3863378.5	60.1754	80.1421	12.0			11/20/04	15		0	-6	01/13/05	CD	0.25	3 x 0.125	Lock pin	0	12			0	0		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_29	421336.25	3863380.25	12.585	85.8717	10.0			11/20/04	7		0	0	01/13/05	GEO	0.25	3 x 2	Geo rock	12.729844	-12.72984			0	0		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_3	421359.75	3863355	89.7341	3.0233	34.0		S-16_C9	11/20/04	43		0	0	01/13/05	MD	2.5	3.5 x 2.25	MK II practice - no fuze (fired)	0	4	W	15	3	4		01/13/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_33	421348	3863382.25	51.1466	92.4469	12.0			11/20/04	13		0	0	01/12/05	CD	0.25	2 x 1 x 0.125	Metal part	-12	0			1	1		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_34	421348	3863378.75	51.1497	80.96	10.0			11/20/04	12		-6	-12	01/12/05	CD	0.25	3 x 0.125	2 ea nails	0	-6			4	5		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_35	421352.5	3863378	65.9193	78.5028	9.0			11/20/04	6		-6	6	01/12/05	GEO	15	1 x 1 x 1	Geo soil	4	0			3	9		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_36	421337.75	3863376	17.5117	71.9249	9.0			11/20/04	10		0	0	01/12/05	GEO	15	1 x 1 x 1	Geo soil	0	8			0	6		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_37	421334.25	3863366	6.0336	39.1024	9.0			11/20/04	5		0	0	01/12/05	GEO	15	1 x 1 x 1	Geo soil					0	6		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_39	421350.25	3863377.75	58.5351	77.6801	8.0			11/20/04	7		-6	12	01/12/05	GEO	0.25	1 x 1	Geo rock	0	-12			8	8.5		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_45	421334.25	3863358.5	6.0402	14.488	8.0			11/20/04	9		0	0	01/12/05	GEO			Geo soil								01/13/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_48	421337.4476	3863384.271	16.5118	99.0709	7.0			11/20/04	10		0	0	01/12/05	GEO	15	1 x 1 x 1	Geo soil								01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_5	421340.75	3863367	27.3657	42.3902	44.0		S-16_C1	11/20/04	80		-6	0	01/13/05	CD	0.25	4 x 2.5	Flat aluminum can	12	0			1	1		01/17/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_53	421341.5	3863360.75	29.8327	21.8787	7.0			11/20/04	5		-12	6	01/12/05	GEO	0.25	1 x 1	Geo rock	4.2432815	4.2432815			2	2.5		01/13/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_57	421361.7216	3863359.335	96.2009	17.2539	6.0			11/20/04	12		-6	-12	01/12/05	CD	0.25	4	Nail	-8.486563	-8.486563			1	3		01/13/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_58	421355.8902	3863368.748	77.0543	48.1416	11.0		S-16_C7	11/20/04	38		0	0	01/12/05	GEO	0.25	1 x 1 x 1	Geo soil	-12.72984	-12.72984			1	1.5		01/17/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_6	421350.6905	3863355.952	60	6.14	26.0		S-16_C16	11/20/04	40		-12	-6	01/13/05	MD	0.25	1 x 1	MK II fuze/frag	-4.243281	4.2432815	0	0	6	6.5		01/13/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_65	421345.75	3863375	43.7685	68.6505	9.0		S-16_C12	11/20/04	16		-6	-12	01/12/05	CD	0.25	3 x 0.25	Flat aluminum can	0	6			1	1		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_7	421337.4376	3863365.31	16.4958	36.8393	29.0		S-16_C11	11/20/04	56		0	-12	01/13/05	MD	2.5	4.5 x 2.25	MK II practice - with fuze (fired)	0	6	S	45	5	6		01/13/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_70	421335.75	3863365.75	10.9568	38.2833	5.0			11/20/04	12		-18	-6	01/12/05	GEO			Geo soil					0	5		01/13/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_71	421345.25	3863358.5	42.1421	14.4976	6.0			11/20/04	3		0	0	01/12/05	GEO	0.25	1 x 2	Geo soil					2	3		01/13/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_8	421357	3863362.25	80.7022	26.8155	29.0		S-16_C19	11/20/04	72		-9	0	01/13/05	CD	1	3 x 3 x 8	Cast steel	5	0			0	0		01/17/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

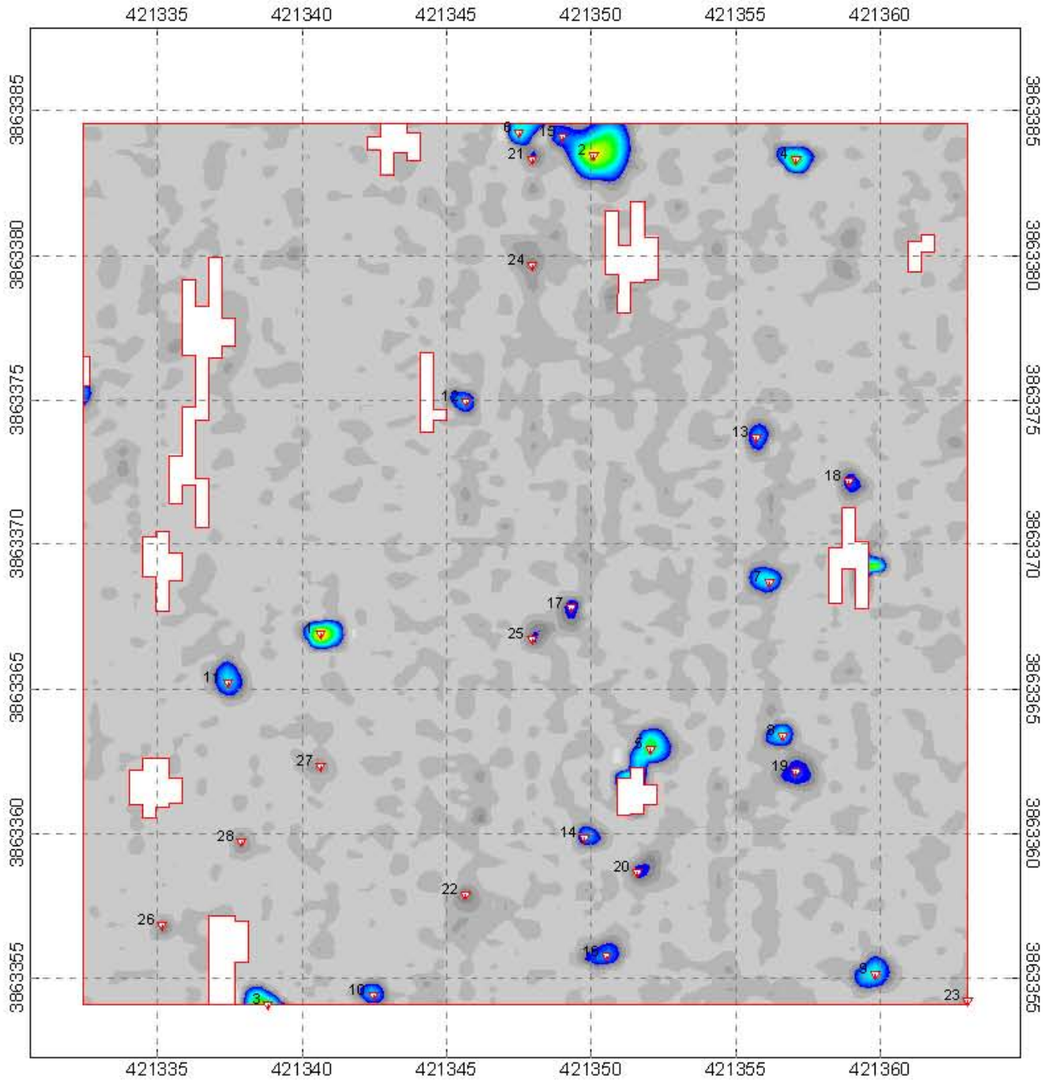
Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

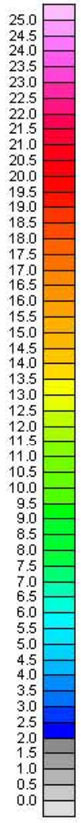
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: S16
Field Book ID:

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

	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)	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
S-16_82	421353.5	3863382.75	69.1971	94.0932	6.0			11/20/04	4		-6	-6	01/12/05	GEO	1	3 x 3	Geo rock	17	0			0	0		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_83	421341.5722	3863371.728	30.06	57.9072	5.0			11/20/04	5		-6	-6	01/12/05	CD	0.25	2	2 nails	0	3			1	1		01/13/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_85	421358.917	3863380.495	86.9776	86.6973	4.0			11/20/04	7		-12	-12	01/12/05	CD	0.5	8 x 0.375	Large nail	-2.121641	-2.121641			10	10		01/19/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_9	421348	3863367	51.1601	42.3968	21.0		S-16_C25	11/20/04	20		-6	-6	01/13/05	CD	1.5	4 x 0.25	Bolt	5	0			6	6		01/17/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_91	421357	3863355.5	80.7082	4.6619	5.0			11/20/04	12		6	-6	01/12/05	CD	0.25	3 x 0.125	Weld rod	6	0			1	2.5		01/13/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005
S-16_C13	421355.7227	3863373.733	76.5	64.5		4	S-16_80	11/20/04			0	0		CD	0.25		Bud can					8	8		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-16_C14	421349.7775	3863359.871	57	19		4	S-16_187	11/20/04			0	0		CD	0.25	4	Wire	0	24			3	3		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-16_C15	421349.0222	3863384.094	54.5	98.5		4	S-16_4	11/20/04			0	0		CD	0.25	6	Screw driver					0	0		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-16_C17	421349.3226	3863367.793	55.5	45		3	S-16_244	11/20/04			0	0		NC			2 x 2 x 1 hole								01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-16_C18	421358.9216	3863372.208	87	59.5		3	S-16_136	11/20/04			0	0		NC			2 x 2 x 2 hole								01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-16_C22	421345.6636	3863357.891	43.5	12.5		2		11/20/04			0	0		CD	0.25		Nail	0	0				3		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-16_C22.1	421345.6636	3863357.891	43.5	12.5		2		11/20/04			0	0		CD	0.25		nail	0	0				1		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-16_C6	421347.4988	3863384.247	49.5	99		8	S-16_16	11/20/04			0	0		MD	0.25	4.5 x 0.25	Frag					2	2		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005
S-16_C7	421356.1784	3863368.705	78	48		7	S-16_58	11/20/04			0	0		CD	0.25	1.5	Wire					4	4		01/25/05	RLF	Yes	TF	01/26/06	YES	DRA	2/5/2005

* 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)

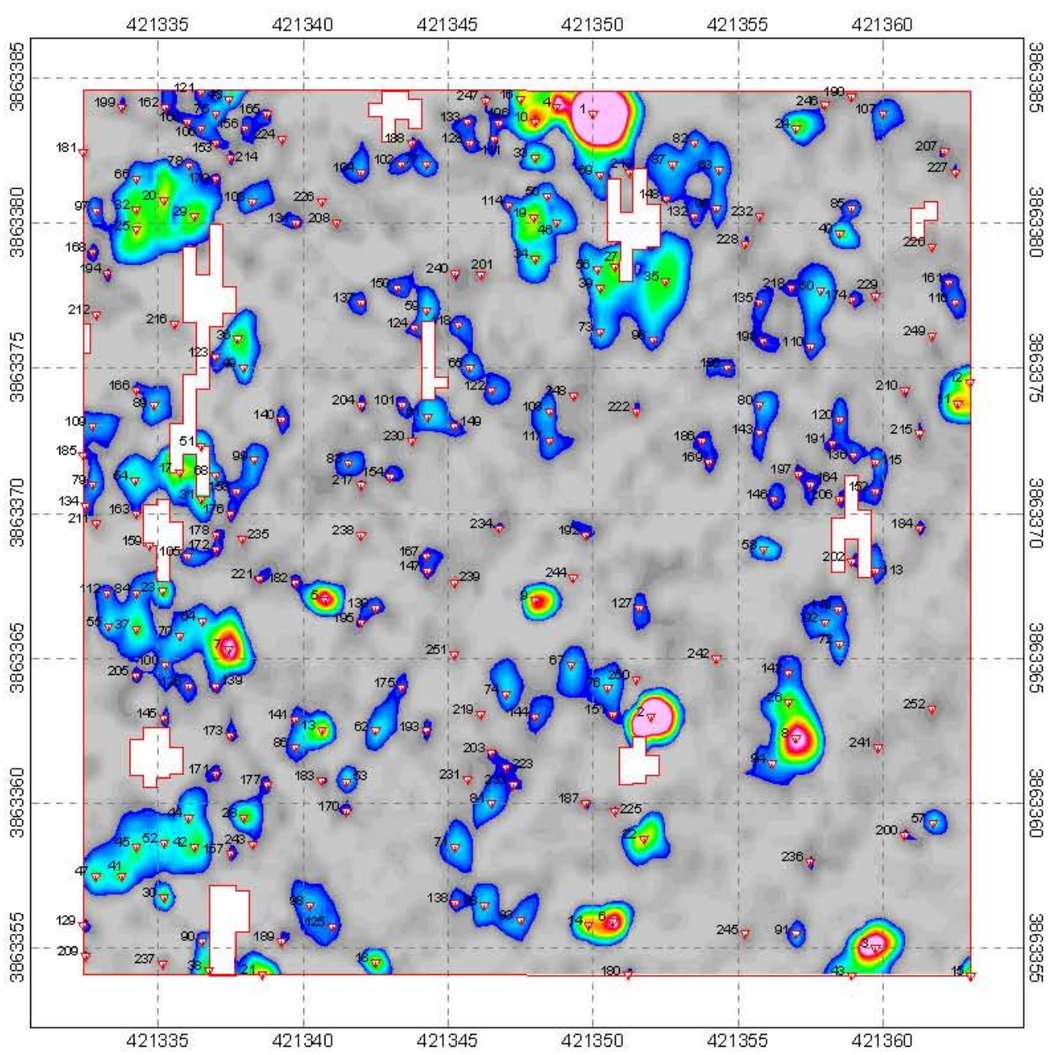
Scale 1:180

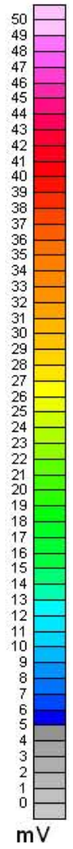
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid S-16
Camp Croft, South Carolina

Date of Survey: November 20, 2004



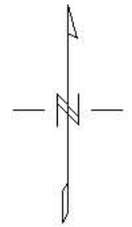


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid S-16
Camp Croft, South Carolina

Date(s) of Survey: November 20, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: S17
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
S-17_183	421374.3108	3863380.431	37.5	86.5	2.0			11/23/04			0	0		GEO			Hot dirt - 2 x 2 x 1								01/27/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-17_2	421369.7438	3863383.86	22.5083	97.7519	27.0			11/23/04	50		0	0	01/18/05	CD	2	2 x 3	Metal					8	9		01/27/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-17_4	421365.169	3863376.777	7.5	74.5	17.0			11/23/04	32		-6	-6	01/18/05	CD		3	Locking pin					1	1		01/27/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-17_5	421362.9503	3863374.925	0.2198	68.419	15.0			11/23/04	27		0	-6	01/18/05	GEO			GO - 2 x 2 x 1 hole								01/27/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-17_6	421362.8831	3863374.188	0	66	16.0			11/23/04			0	0		CD			Shared with S16-11								01/27/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-17_C1	421367.9129	3863382.87	16.5	94.5		10		11/23/04			0	0		CD	.25	3 x .25 x .25	wire, Rusted	0	0	NA	0	4	4	S17_C1 - #012	1/18/06	bam	NA	DRA	02/22/06	YES	RVW	
S-17_C1	421367.9129	3863382.87	16.5	94.5		10		11/23/04			0	0	01/18/05	CD	0.25	2 x 0.062	Wire brush - 4 pieces - 2 digs					0	0.25		01/20/05	DRG	NA	DRA	02/22/06	yes	ALJ	3/5/2005
S-17_C10	421372.0255	3863380.127	30	85.5		4	S-17_70	11/23/04			0	0		CD	0.25	.25 x 0.25 x 0.2	Metal ball	-5.657709	5.6577086			1	1		01/20/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C11	421366.9992	3863384.394	13.5	99.5		4		11/23/04			0	0		CD		1.5 x 2	Metal	-12	0			5	5		01/27/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C12	421380.7076	3863374.031	58.5	65.5		3	S-17_123	11/23/04			0	0		CD	.25	.5 x .5 x .25	dime, Oxidized	0	0	NA	0	2	2	S17_C12 - #013	1/18/06	bam	YES	TF	01/30/06	YES	RVW	01/25/06
S-17_C12	421380.7076	3863374.031	58.5	65.5		3	S-17_123	11/23/04			0	0		GEO	10	12 x 8	Geo rock					12	14		01/20/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C13	421390.7578	3863356.661	91.5	8.5		3	S-17_C17	11/23/04			0	0		NC			checked with em-61								1/18/06	bam	YES	TF	01/18/06	NA	DRA	02/22/06
S-17_C13	421390.7578	3863356.661	91.5	8.5		3	S-17_C17	11/23/04	2		0	0	01/18/05	NC		2 x 2 x 1	No contact								01/20/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C14	421370.6543	3863379.67	25.5	84		3	S-17_90	11/23/04			0	0		CD	.25	3 x 3 x 3	aluminum beer can, Deformed	0	0	NA	15	2	3	S17_C14 - #008	1/18/06	bam	NA	DRA	02/22/06	YES	RVW	
S-17_C14	421370.6543	3863379.67	25.5	84		3	S-17_90	11/23/04			0	0		CD	0.25	.25 x 0.25 x 0.2	Metal ball	0	10			2	2		01/20/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C15	421366.5412	3863380.89	12	88		3		11/23/04	21		0	0	01/18/05	CD	0.25	5 x 3 x 0.5	Flat aluminum can	4.2432815	4.2432815			1	1.5		01/20/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C16	421368.3628	3863356.362	18	7.5		3	S-17_1	11/23/04			0	0		CD			Barb wire - LIP	0	-12			10	10		01/27/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C17	421393.2027	3863384.082	99.5	98.5		2	S-17_10	11/23/04			0	0		CD	.25	5 x .25 x .25	nail, Rusted	0	0	NA	90	.25	3	S17_C17 - #009	1/18/06	bam	NA	DRA	02/22/06	YES	RVW	
S-17_C17	421393.2027	3863384.082	99.5	98.5		2	S-17_10	11/23/04			0	0		GEO		2 x 2 x 1	Geo soil					0	6		01/20/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C18	421383.4512	3863378.905	67.5	81.5		2		11/23/04			0	0		NC			checked with em-61								1/18/06	bam	YES	TF	01/18/06	NA	DRA	02/22/06
S-17_C18	421383.4512	3863378.905	67.5	81.5		2		11/23/04	3		0	0	01/18/05	GEO		2 x 2 x 1	Geo soil					0	6		01/20/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C19	421376.1389	3863380.126	43.5	85.5		2	S-17_133	11/23/04			0	0		CD	.25	.25 x .25 x .25	steel shoot, Rusted	0	0	NA	0	2	2	S17_C19 - #011	1/18/06	bam	NA	DRA	02/22/06	YES	RVW	
S-17_C19	421376.1389	3863380.126	43.5	85.5		2	S-17_133	11/23/04			0	0		GEO			GO - 2 x 2 x 1								01/27/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C2	421372.9372	3863371.138	33	56		10	S-17_7	11/23/04			0	0		CD	.25	.5 x .5 x .25	penny, Oxidized	0	0	NA	0	3	3	S17_C2 - #010	1/18/06	bam	YES	TF	01/30/06	YES	RVW	01/25/06
S-17_C2	421372.9372	3863371.138	33	56		10	S-17_7	11/23/04			0	0		CD	0.25	5 x 4 x 0.25	Flat aluminum can	0	6			1	1		01/20/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C20	421362.8777	3863354.23	0	0.5		2	S-17_8	11/23/04			0	0		CD			Corner nail								01/27/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C21	421379.3391	3863383.629	54	97		2		11/23/04			0	0		NC			checked with em-61								1/18/06	bam	YES	TF	01/18/06	NA	DRA	02/22/06
S-17_C21	421379.3391	3863383.629	54	97		2		11/23/04			0	0		GEO		2 x 2 x 1	Geo soil									DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C22	421388.023	3863384.388	82.5	99.5		2	S-17_41	11/23/04			0	0		CD			1 1/2 pipe cap	-16.97313	16.973126			18	18		01/27/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C23	421384.366	3863381.799	70.5	91		2		11/23/04			0	0		NC			checked with em-61								1/18/06	bam	YES	TF	01/18/06	NA	DRA	02/22/06
S-17_C23	421384.366	3863381.799	70.5	91		2		11/23/04			0	0		GEO		2 x 2 x 1	Geo soil					0	6		01/20/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C24	421390.7652	3863384.235	91.5	99		2	S-17_125	11/23/04	2		0	0	01/18/05	GEO			Hot dirt - 2 x 2 x 1 hole								01/27/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C3	421363.3408	3863376.625	1.5	74		9		11/23/04			0	0		SA	.25		small arms, 30cal, Oxidized	0	0					S17_C3 - #007	1/18/06	bam	NA	DRA	02/22/06	YES	RVW	
S-17_C3	421363.3408	3863376.625	1.5	74		9		11/23/04	2.5		0	0	01/18/05	CD	0.25	1 x 0.5	Fragment	4.2432815	-4.243281			6	6		01/20/05	DRG	NA	DRA	02/22/06	YES	ALJ	3/5/2005
S-17_C4	421365.1663	3863366.722	7.5	41.5		9	S-17_20	11/23/04			0	0		CD	0.25	5 x 4 x 0.25	Flat aluminum can	0.3536068	-0.353607			0	0		01/20/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C5	421363.6434	3863369.008	2.5	49		6	S-17_14	11/23/04			0	0		CD	0.25	5 x 3 x 0.25	Flat aluminum can					1	1		01/20/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C6	421372.025	3863378.451	30	80		6	S-17_13	11/23/04			0	0		CD	0.25	4 x 3 x 0.5	Flat aluminum can	4.2432815	4.2432815			0.5	0.5		01/20/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C7	421373.7008	3863378.298	35.5	79.5		5	S-17_17	11/23/04			0	0		CD	0.25	4 x 4 x 1	Flat aluminum can					1	1.5		01/20/05	DRG	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C8	421367.6009	3863355.753	15.5	5.5		4	S-17_3	11/23/04			0	0		CD			Barb wire - LIP	-12	0			10	10		01/27/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005
S-17_C9	421367.9133	3863384.546	16.5	100		4		11/23/04			0	0		CD	.25	5 x 3 x .25	aluminum beer can, Deformed	0	0	NA	0	6	7	S17_C9 - #005	1/18/06	bam	NA	DRA	02/22/06	YES	RVW	

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

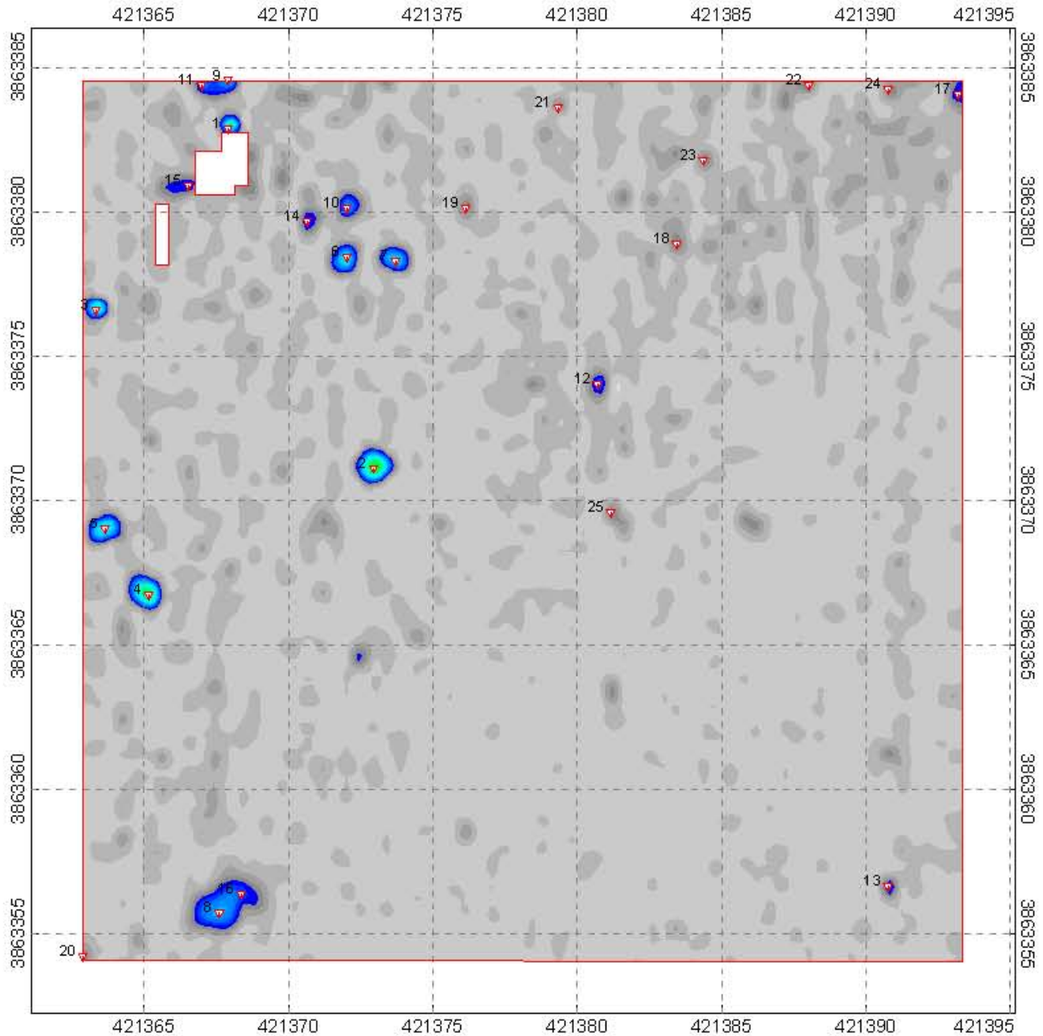
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid S17
Field Book ID:

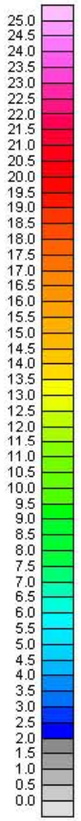
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
S-17_C9	421367.9133	3863384.546	16.5	100		4		11/23/04			0	0		GEO			Hot dirt					12	12		01/27/05	RLF	NA	DRA	02/22/06	YES	DRA	2/5/2005

* 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)

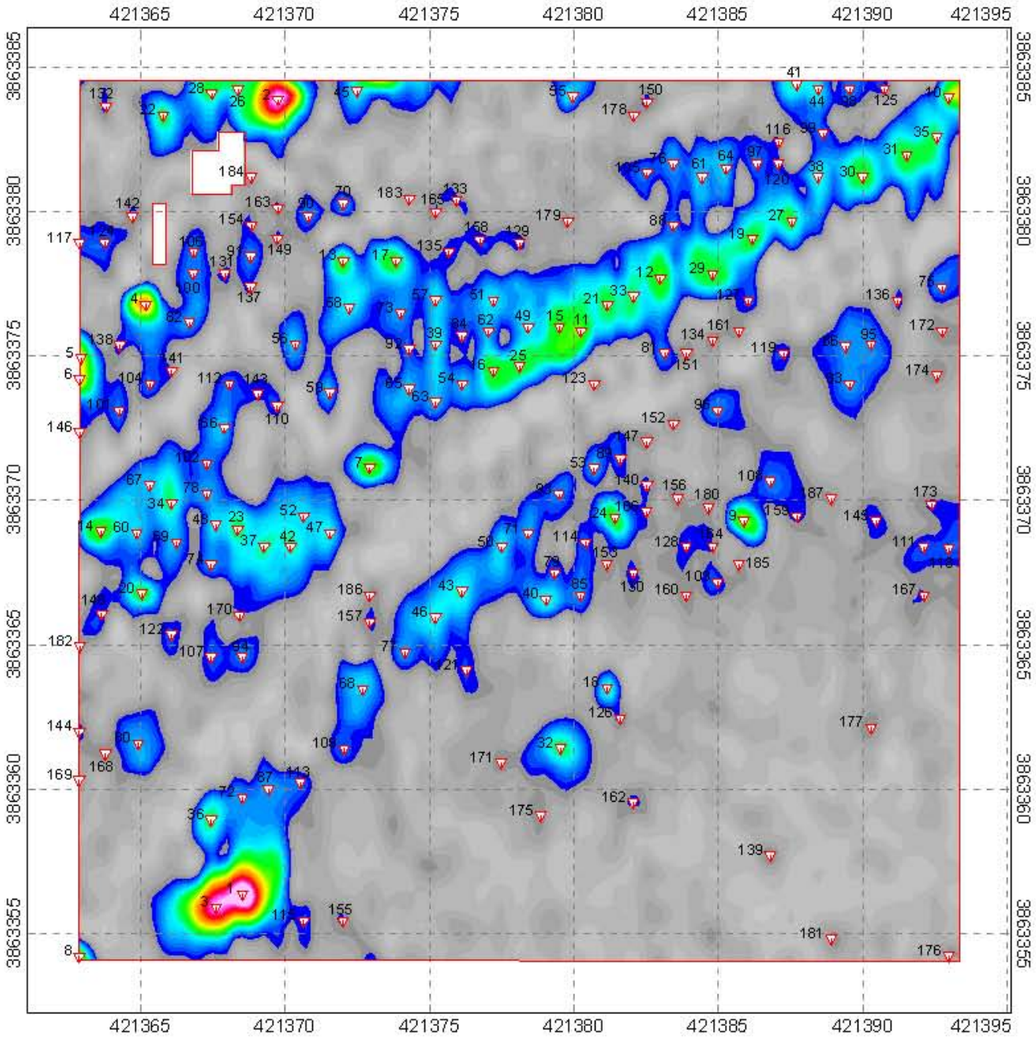
Scale 1:180

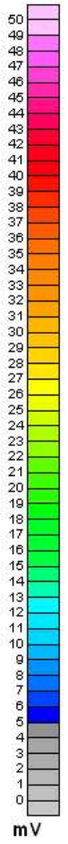
2.5 0 2.5 5 7.5 10

metres

NAD83 / UTM zone 17N

Zapata Engineering
EM61 MK2 Chi2 Grid S-17 Camp Croft, South Carolina
Date of Survey: November 23, 2004





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)

Scale 1:180

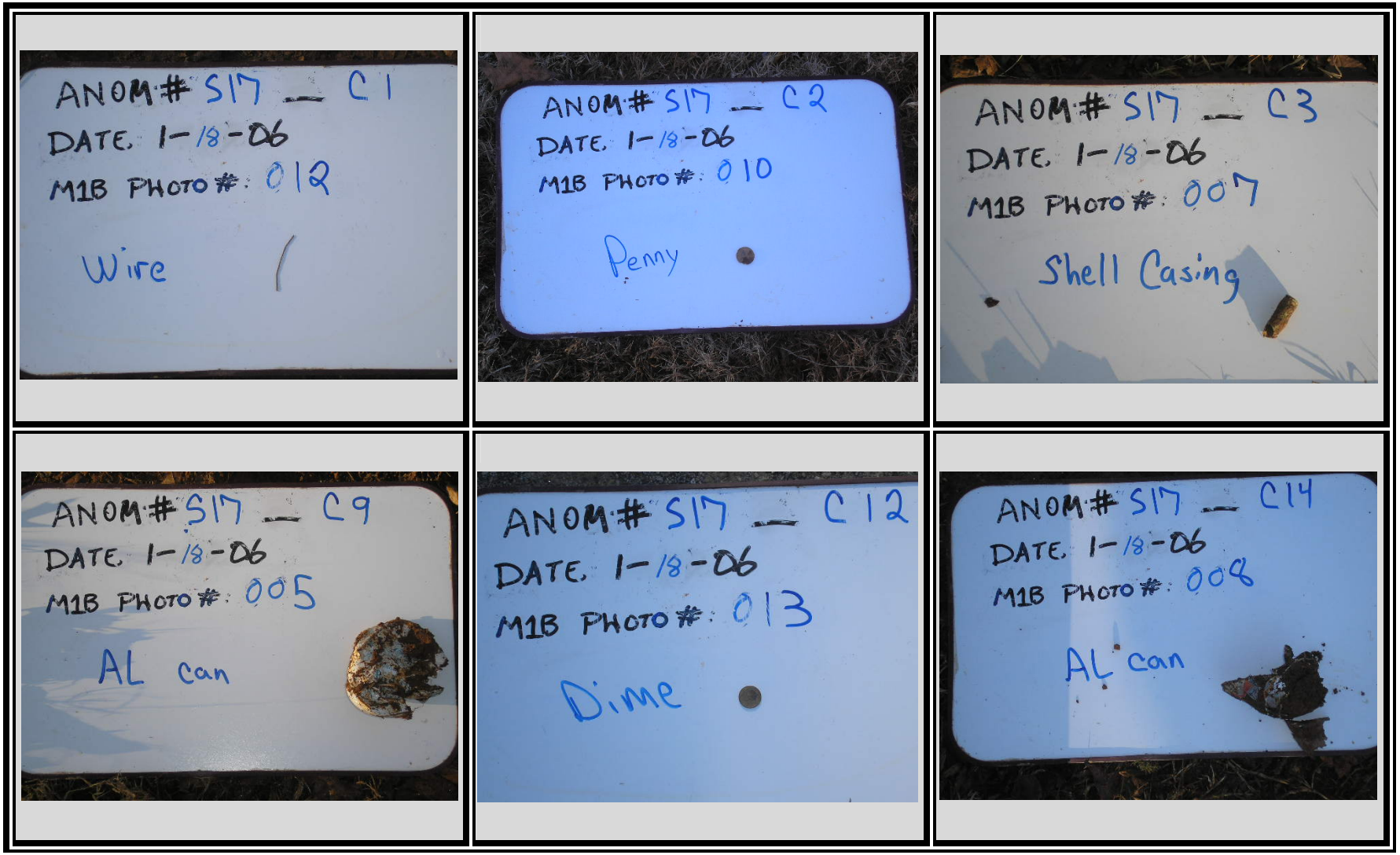
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

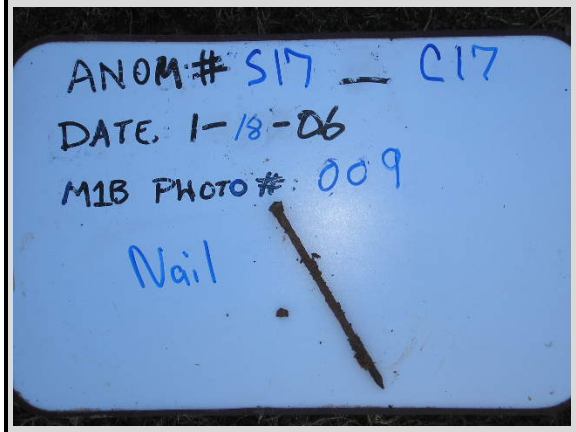
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid S-17
Camp Croft, South Carolina

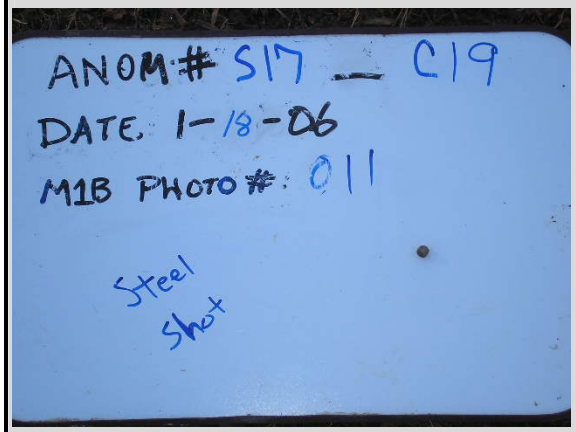
Date(s) of Survey: November 23, 2004

GRID S17 DIG PHOTOS



GRID S17 DIG PHOTOS (CONTINUED)





ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

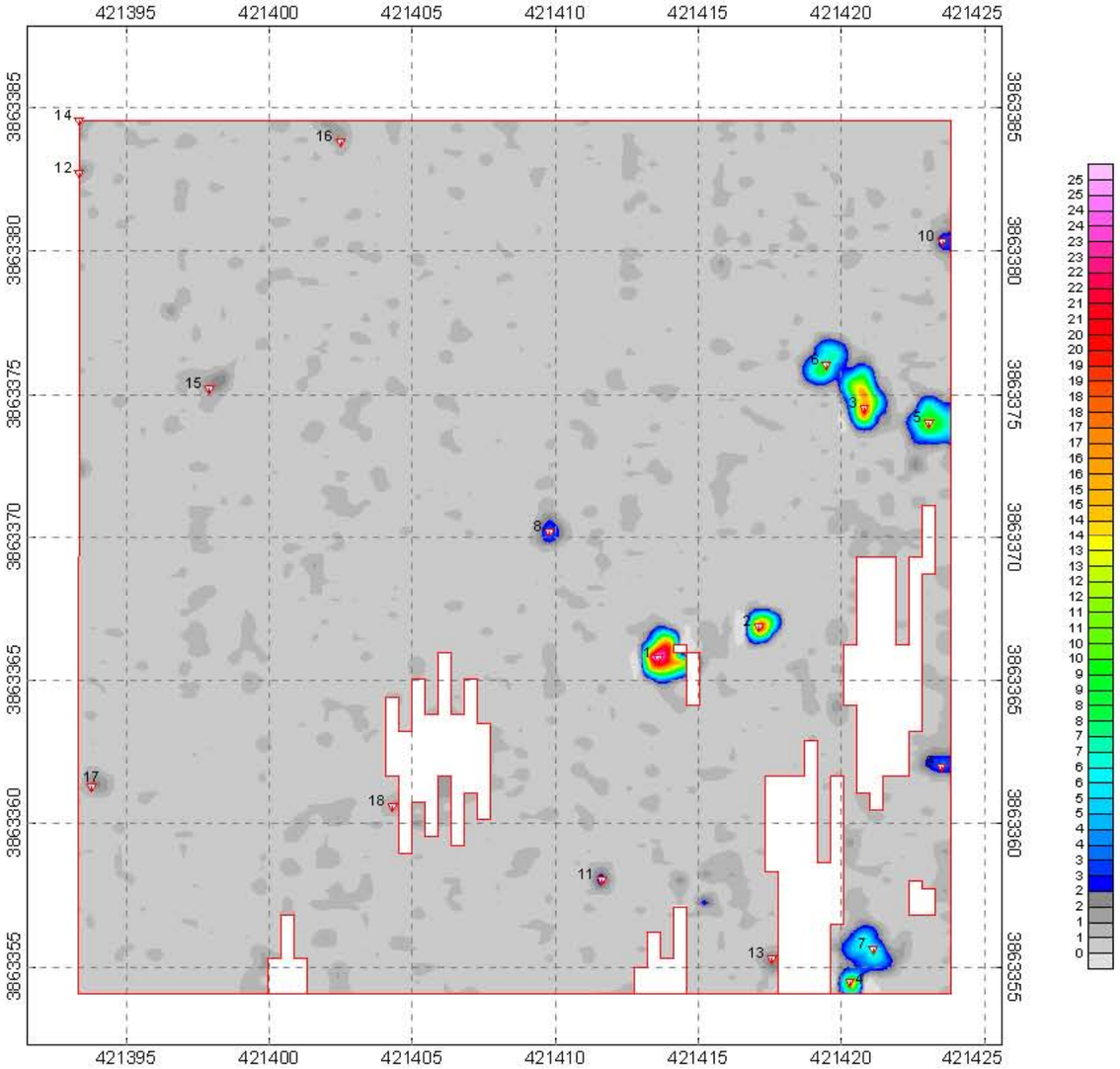
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: S18
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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				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)	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
S-18_1	421413.7151	3863365.846	66.8376	38.6659	207.0		S-18_C1	11/27/04	475		0	0	01/08/05	CD	2	30	1/2" pipe						0		01/12/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-18_11	421420.3167	3863370.669	88.5	54.5	18.0			11/27/04	22		0	0	01/08/05	CD	0.25	2	Clevis pin						0		01/12/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-18_15	421422.1408	3863355.738	94.5	5.5	8.0			11/27/04	100		-24	0	01/08/05	CD	0.5	9	Survey Nail						1		01/12/05	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
S-18_16	421393.3552	3863384.387	0	99.5	8.0		S-18_C14 / T-18_C10	11/27/04	4		0	0	01/08/05	NC			Non-ferrous								01/12/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-18_19	421407.497	3863360.04	46.4351	19.6053	6.0			11/27/04	10		0	0	01/08/05	GEO			Hot dirt					8			01/12/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-18_2	421420.7171	3863374.866	89.8105	68.2779	186.0		S-18_C3	11/27/04	390		6	12	01/08/05	NC			Non-ferrous								01/12/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-18_20	421416.6623	3863377.677	76.5	77.5	5.0			11/27/04	3		0	0	01/08/05	GEO			Hot dirt	-6	0			6			01/12/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-18_4	421423.114	3863374.031	97.6779	65.5395	84.0		S-18_C5	11/27/04	88		6	-30	01/08/05	NC			Non-ferrous								01/12/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-18_6	421419.4739	3863376.057	85.7292	72.1843	41.0		S-18_C6	11/27/04	55		0	0	01/08/05	CD	0.5	6	1/2" pipe	0	-12				0		01/12/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-18_7	421409.8047	3863370.214	54	53	34.0		S-18_C8	11/27/04	50		0	0	01/08/05	CD	0.25	5	Nail, survey						2		01/12/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-18_8	421423.5137	3863362.136	99	26.5	27.0		S-18_C9	11/27/04	24		18	6	01/08/05	GEO		7 x 9	Rock						1		01/12/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-18_9	421417.199	3863366.877	78.2709	42.0521	40.0		S-18_C2	11/27/04			0	0	01/08/05	NC			Non-ferrous								01/12/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-18_C18	421404.3177	3863360.618	36	21.5		2		11/27/04			0	0		SA	.25		small arms, 30cal, Oxidized	0	0					S18_C18 - #015	1/18/06	barn	YES	TF	01/26/06	YES	RVW	02/22/06

* 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)

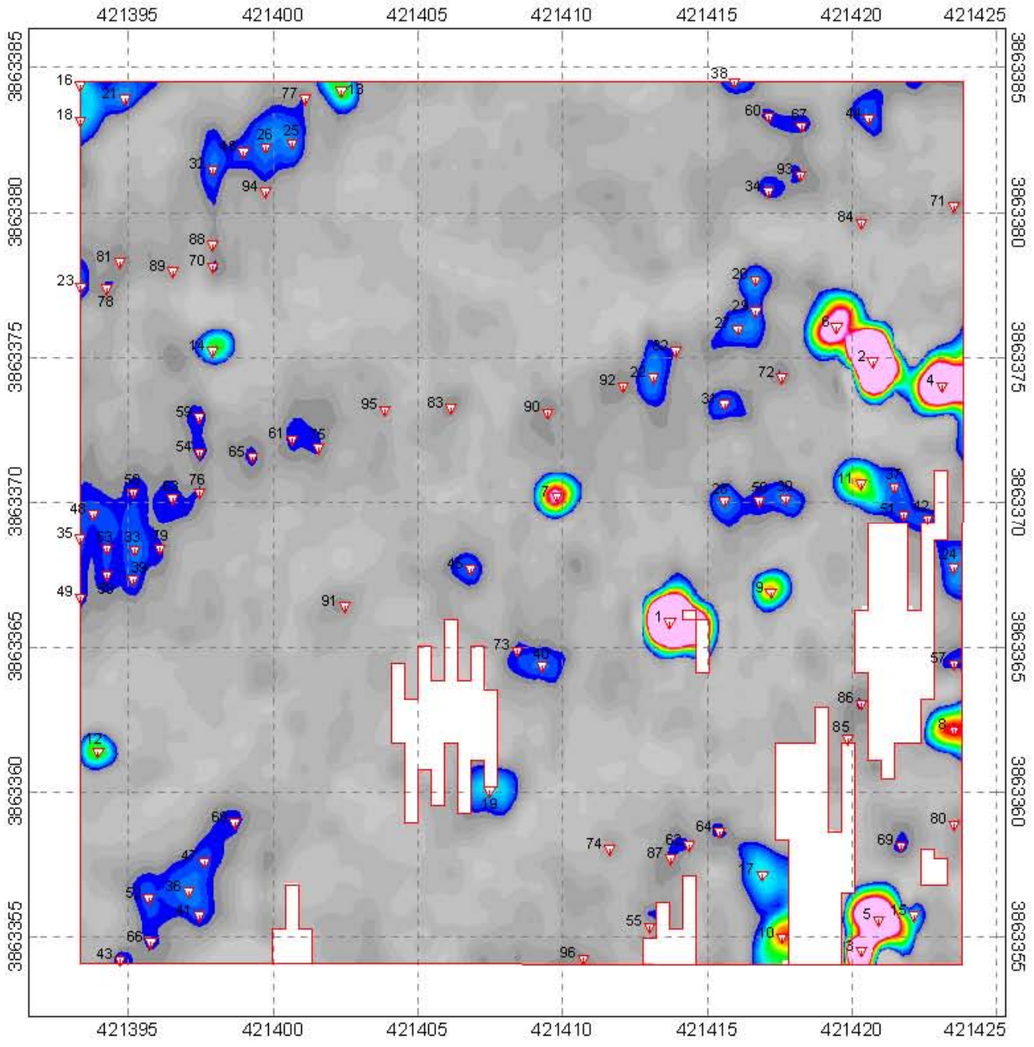
Scale 1:180

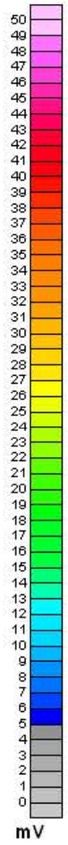
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid S-18
Camp Croft, South Carolina

Date of Survey: November 27, 2004



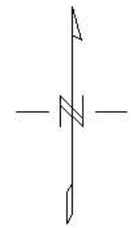


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

2.5 0 2.5 5 7.5 10

metres

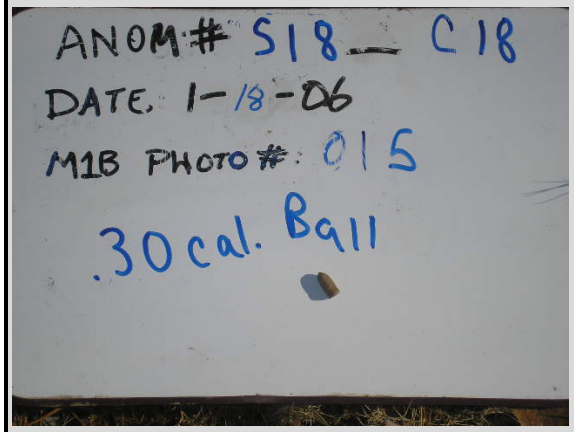
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid S-18
Camp Croft, South Carolina

Date(s) of Survey: November 27, 2004

GRID S18 DIG PHOTOS



ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: S19
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	Chi^2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs)	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
S-19_104	421433.4185	3863378.59	31.5	80.5	10.0			11/28/04			0	0		CD	0		pieces of old steel belted tire, Rusted	0	0	NA	0	5	5	S19_104 - #020	1/25/06	bam	YES	TF	01/25/06	YES	RVW	01/25/06
S-19_105	421445.976	3863357.664	72.7275	11.8406	10.0			11/28/04			0	0		CD	.25	3 x .25 x .25	wire, Rusted	0	0	NA	0	2	2	S19_105 - #019	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_106	421427.0215	3863378.894	10.5	81.5	10.0		S-19_C95	11/28/04	4		-18	6	01/09/05	CD			Small wire						0		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_108	421447.4527	3863373.026	77.571	62.2455	9.0			11/28/04			0	0		CD	.5	13 x .25 x .25	wire and metal rod, Rusted	0	0	NA	0	3	4	S19_108 - #007	1/25/06	bam	NA	DRA	02/22/06	YES	RVW	
S-19_110	421427.4775	3863374.933	12	68.5	13.0		S-19_C27	11/28/04	32		0	0		CD			Beer can						0		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_111	421432.2001	3863378.742	27.5	81	10.0			11/28/04			0	0		CD	0		pieces of old steel belted tire, Rusted	0	0	NA	0	6	6	S19_111 - #020	1/25/06	bam	YES	TF	01/25/06	YES	RVW	01/25/06
S-19_112	421451.2387	3863359.693	90	18.5	10.0			11/28/04	10		0	0	01/17/05	CD		9	Wire fence	12.729844	-12.72984			2	2		01/18/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_12	421438.1846	3863370.914	47.149	55.3124	77.0		S-19_C8	11/28/04	100		0	0	01/09/05	CD	0.25	13	Barb wire	0	0				1		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_12.1	421438.1846	3863370.914	47.149	55.3124	77.0			11/28/04	100		0	0	01/09/05	CD	0.25	13	Barb wire	0	0				1		01/11/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06
S-19_120	421443.0128	3863363.352	63	30.5	10.0			11/28/04	12		0	0	01/09/05	CD			Nail	0	-24				1		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_123	421443.4697	3863362.59	64.5	28	10.0		S-19_C70	11/28/04	15		0	0	01/09/05	CD			Wire	-24	0				1		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_124	421436.6169	3863377.218	42	76	7.0			11/28/04	4		0	0	01/09/05	CD		4	Nail						2		01/12/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_125	421432.8094	3863379.199	29.5	82.5	8.0			11/28/04	5		0	-6	01/09/05	CD			Wire brush wires - Shared with 143						1		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_13	421442.4025	3863354.514	61	1.5	97.0		S-19_C20	11/28/04	102		-12	0	01/09/05	CD	0.25	144	Wire						0		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_130	421425.1914	3863369.906	4.5	52	6.0			11/28/04	5		6	0	01/09/05	CD		3	1/4" cable	-2.121641	-2.121641				1		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_131	421449.4112	3863371.275	84	56.5	9.0			11/28/04	3		0	0	01/09/05	NC											01/11/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
S-19_132	421435.2454	3863372.952	37.5	62	6.0			11/28/04	6		0	0	01/09/05	NC											01/11/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
S-19_137	421426.5658	3863384.074	9	98.5	5.0			11/28/04	3		0	0	01/09/05	CD		1.5	Nail						1		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_138	421445.7553	3863369.751	72	51.5	6.0			11/28/04	6.5		0	0	01/09/05	CD		2	Wire						0		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_139	421451.7687	3863365.289	91.739	36.8614	6.0			11/28/04	4		12	-6	01/09/05	CD			Wire loop						2		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_140	421447.5829	3863364.417	78	34	8.0		S-19_C82	11/28/04	10		0	0	01/09/05	CD			Small						1		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_141	421429.3034	3863366.249	18	40	6.0			11/28/04	5.5		0	0	01/09/05	GEO			Hot dirt						6		01/12/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_142	421452.6098	3863361.216	94.5	23.5	6.0			11/28/04	12		0	-12	01/09/05	CD		3	Nail	0	18				2		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_143	421432.5045	3863377.828	28.5	78	6.0			11/28/04	4		0	0	01/09/05	CD			Wire brush wires - Shared with 125						1		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_149	421430.8289	3863377.066	23	75.5	5.0			11/28/04	3		-12	6	01/09/05	NC											01/11/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06
S-19_151	421435.2452	3863372.038	37.5	59	4.0			11/28/04			0	0		CD	.25	.5 x 3 x .25	wire and aluminum foil, Oxidized	0	0	NA	0	3	3	S19_151 - #012	1/25/06	bam	NA	DRA	02/22/06	YES	RVW	
S-19_162	421449.8675	3863356.34	85.5	7.5	5.0			11/28/04	3		12	0	01/17/05	GEO			Small rock	-24	0				0		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_167	421436.1599	3863376.761	40.5	74.5	5.0			11/28/04	4		0	0	01/17/05	GEO			Hot dirt - 1 x 1 x 1 hole					12	12		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_179	421443.9264	3863359.389	66	17.5	4.0			11/28/04			0	0		CD	.25	.5 x .25 x .25	nail, Rusted	0	0	NA	0	3	3	S19_179 - #025	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_183	421434.3319	3863375.847	34.5	71.5	5.0			11/28/04	5		6	-6	01/17/05	MD			Scrap grenade fuze					4	4		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_185	421434.4266	3863367.84	34.8153	45.2255	6.0			11/28/04	8		-6	0	01/17/05	CD		2	Nail					1	1		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_186	421426.2552	3863360.155	8	20	4.0			11/28/04	2		0	0	01/17/05	NC			1 x 1 x 1 hole								01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_187	421442.5665	3863370.513	61.5	54	8.0			11/28/04			U	U		CD	.25	1 x .25 x .25	wire, Rusted	U	U	SW	U	2	2	S19_187 - #021	1/25/06	bam	NA	DRA	02/22/06	YES	RVW	
S-19_194	421426.2599	3863378.742	8	81	5.0			11/28/04	4		18	0	01/17/05	CD	0.25	1 x 3	Metal	0	12			1	1		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_2	421453.6389	3863367.137	97.5493	42.9265	628.0		S-19_C11 / S-19_	11/28/04	550		0	0	01/09/05	CD	1	36	1" rod pipe						0		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_214	421428.8458	3863363.659	16.5	31.5	3.0			11/28/04	2		0	0	01/17/05	NC			1 x 1 x 1 hole								01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_22	421452.1527	3863356.949	93	9.5	46.0		S-19_C22	11/28/04	95		0	0	01/09/05	CD	0.25	8	Wire						2		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_220	421428.3894	3863366.249	15	40	3.0			11/28/04	3		0	0	01/17/05	GEO			Rock	0	-12			2	2		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_222	421434.8172	3863376.292	36.0925	72.9596	4.0			11/28/04	6		0	0	01/17/05	GEO			Rock	12	0			2	3		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_227	421430.4556	3863382.068	21.7711	91.9151	2.0		S-19_C91	11/28/04	2		12	0	01/17/05	NC			1 x 1 x 1 hole								01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: S19
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
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)	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
S-19_231	421430.2205	3863381.027	21	88.5	4.0			11/28/04	3		0	-24	01/17/05	CD		9	Wire	0	-24			1	1		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_247	421449.868	3863368.989	85.5	49	3.0			11/28/04	2.5		0	12	01/17/05	CD		1.25	1/4" bolt	-12	0			2	2		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_249	421445.755	3863365.484	72	37.5	3.0			11/28/04			0	0		CD	.25	3 x .25 x .25	nail, Rusted	0	0	NA	0	2	2	S19_249 - #032	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_256	421424.2774	3863369.754	1.5	51.5	3.0			11/28/04	2		-6	-12	01/17/05	GEO			Hot dirt - 1 x 1 x 1								01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_266	421452.1528	3863363.35	93	30.5	4.0			11/28/04	9		0	0	01/17/05	CD		3	Nail	-12	0			1	1		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_267	421436.3103	3863364.572	41	34.5	3.0			11/28/04	6		0	0	01/17/05	GEO			Rock	0	-12			2	2		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_270	421448.04	3863367.16	79.5	43	3.0			11/28/04	2		-12	6	01/17/05	GEO			Rock	0	-18			1	1		01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_28	421441.0324	3863362.742	56.5	28.5	42.0		S-19_C18 / S-19_(	11/28/04	50		0	0	01/09/05	CD	0.5		Nail, multiple						2		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_29	421428.5756	3863370.545	15.6081	54.0984	33.0		S-19_C102 / S-19_	11/28/04	64		0	-12	01/09/05	CD	0.25	36	Wire						1		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_3	421427.0162	3863357.108	10.5	10	369.0		S-19_C3	11/28/04	265		6	-18	01/09/05	CD	1	36	1/2" rod						1		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_30	421433.682	3863372.018	32.3688	58.9357	45.0		S-19_C16	11/28/04	45		0	12	01/09/05	CD	0.25	0.25	Horse shoe						2		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_31	421448.1918	3863356.645	80	8.5	31.0		S-19_C59	11/28/04	31		0	0	01/09/05	CD		6	Nail						0		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_32	421444.2533	3863364.684	67.0714	34.8725	37.0		S-19_C33	11/28/04	52		-18	0	01/09/05	CD			Nails						1		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_35	421447.7347	3863356.341	78.5	7.5	28.0			11/28/04			0	0		CD	.25	6 x .25 x .25	wire, Rusted	0	0	NA	0	2	2	S19_35 - #020	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_36	421437.4989	3863357.418	44.9048	11.0245	35.0		S-19_C32	11/28/04	68		12	0	01/09/05	CD	0.25	24	Wire						0		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_37	421433.5685	3863365.791	32	38.5	25.0			11/28/04			0	0		CD	.25	3 x .25 x .25	nail, Rusted	0	0	NA	0	2	2	S19_37 - #034	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_39	421453.0668	3863358.016	96	13	31.0			11/28/04			0	0		CD	.25	100 x .25 x .25	metal stake, shared with s19-c14, Rusted	0	0	NA	0	3	3	S19_39 - #011	1/24/06	rly	YES	TF	01/26/06	YES	RVW	01/25/06
S-19_40	421451.0862	3863354.511	89.5	1.5	31.0			11/28/04	26		6	0	01/09/05	CD		12	Wire						0		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_43	421441.7369	3863356.484	58.8147	7.965	28.0			11/28/04			0	0		CD	.25	3 x .25 x .25	nails [2], Rusted	0	0	NA	0	4	4	S19_43 - #026	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_44	421432.3144	3863362.139	27.8858	26.5131	23.0		S-19_C87	11/28/04	22		0	0	01/09/05	CD		2	Nail						0		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_47	421436.6161	3863371.885	42	58.5	27.0		S-19_C44	11/28/04	20		18	12	01/09/05	CD		18	Wire	0	18				1		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_49	421440.4232	3863364.419	54.5	34	22.0		S-19_C52	11/28/04	37		0	0	01/09/05	CD		10	Wire						1		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_5	421443.3167	3863355.885	64	6	183.0		S-19_C30	11/28/04	175		12	12	01/09/05	CD	0.25	6 x 18	Bracket						2		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_50	421424.3536	3863379.94	1.7414	84.9329	34.0		S-19_C13	11/28/04	50		12	0	01/09/05	GEO		4 x 5	Rock	0	-3				4		01/12/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_56	421432.9598	3863368.991	30	49	19.0			11/28/04			0	0		CD	.25	4 x .25 x .25	nail, Rusted	0	0	NA	90	0	2	S19_56 - #016	1/25/06	barn	NA	DRA	02/22/06	YES	RVW	
S-19_59	421441.1632	3863364.172	56.929	33.1906	23.0		S-19_C68	11/28/04	10		6	-24	01/17/05	CD			Wire/nail	0	-16						01/18/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_61	421445.1459	3863369.142	70	49.5	15.0		S-19_C73	11/28/04	78		0	0	01/09/05	CD		8	Wire	-24	0				2		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_62	421445.2002	3863364.81	70.1791	35.2855	21.0		S-19_C49	11/28/04	18		0	0	01/09/05	CD		14	Wire						2		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_63	421444.3833	3863357.713	67.5	12	18.0			11/28/04			0	0		CD	.25	12 x .25 x .25	wire, Rusted	0	0	NA	0	2	2	S19_63 - #022	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_68	421448.8012	3863358.474	82	14.5	13.0			11/28/04			0	0		CD	.25	12 x .25 x .25	barb wire, Rusted	0	0	NA	0	2	2	S19_68 - #015	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_70	421448.0395	3863357.407	79.5	11	15.0			11/28/04	3		12	-12	01/17/05	CD			Brick	-12	0			3	4		01/18/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_73	421434.3324	3863378.285	34.5	79.5	16.0			11/28/04			0	0		CD	0		pieces of old steel belted tire, Rusted	0	0	NA	0	6	6	S19_73 - #020	1/25/06	barn	YES	TF	01/25/06	YES	RVW	01/25/06
S-19_74	421452.2639	3863360.054	93.3648	19.6859	16.0		S-19_C43	11/28/04	32		0	0	01/17/05	CD	0.25	36	Barb wire	0	-12			3	3		01/18/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_75	421433.7927	3863377.923	32.7287	78.3112	15.0			11/28/04			0	0		CD	0		pieces of old steel belted tire, Rusted	0	0	NA	0	6	6	S19_75 - #020	1/25/06	barn	YES	TF	01/25/06	YES	RVW	01/25/06
S-19_76	421448.6489	3863359.388	81.5	17.5	13.0			11/28/04			0	0		CD	.25	12 x .25 x .25	barb wire, Rusted	0	0	NA	0	2	2	S19_76 - #014	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_78	421434.4846	3863377.523	35	77	14.0			11/28/04			0	0		CD	0	0 x 0 x 0	pieces of old steel belted tire, Rusted	0	0	NA	0	6	6	S19_78 - #020	1/25/06	barn	YES	TF	01/25/06	YES	RVW	01/25/06
S-19_80	421442.0948	3863363.317	59.987	30.3874	16.0			11/28/04			0	0		CD	.25	3 x .25 x .25	wire, Rusted	0	0	NA	0	1	1	S19_80 - #030	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_81	421442.4045	3863373.713	61	64.5	15.0			11/28/04			0	0		CD	.25	11 x .25 x .25	wire, Rusted	0	0	SW	0	0	0	S19_81 - #008	1/25/06	barn	NA	DRA	02/22/06	YES	RVW	
S-19_84	421436.1582	3863366.248	40.5	40	13.0			11/28/04			0	0		CD	.25	3 x .25 x .25	nail, Rusted	0	0	NA	0	2	2	S19_84 - #029	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_85	421440.2714	3863368.685	54	48	11.0			11/28/04			0	0		CD	.25	5 x .25 x .25	2ea nails, Rusted	0	0	NA	0	3	3	S19_85 - #004	1/25/06	barn	NA	DRA	02/22/06	YES	RVW	

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: S19
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
S-19_87	421434.6359	3863372.19	35.5	59.5	11.0		S-19_C63	11/28/04	14		0	0	01/17/05	CD		12	Wire	0	-12			0	0		01/18/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_88	421434.862	3863371.444	36.2423	57.0499	12.0		S-19_C86	11/28/04	14		12	-6	01/17/05	CD		12	Wire	-12	0			0	0		01/18/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_89	421446.2122	3863369.142	73.5	49.5	11.0			11/28/04	3		0	0	01/17/05	CD		2	Nail					1	1		01/18/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_90	421444.5365	3863367.161	68	43	8.0		S-19_C88	11/28/04	20		12	0	01/17/05	CD	0.25	5	Nail					0	0		01/18/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_92	421427.9345	3863375.39	13.5	70	16.0		S-19_C31	11/28/04	32		6	-6	01/09/05	CD		18	Wire						0		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_94	421438.8525	3863372.793	49.3406	61.4794	8.0			11/28/04			0	0		CD	.5	25 x .25 x .25	barbed wire, Rusted	0	0	SW	15	2	2	S19_94 - #017	1/25/06	barn	NA	DRA	02/22/06	YES	RVW	
S-19_95	421425.1874	3863354.366	4.5	1	31.0		S-19_C29	11/28/04			0	0	01/09/05	GEO			Rock	0	-36				0		01/11/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_96	421451.5434	3863358.626	91	15	11.0		S-19_C45	11/28/04	18		0	0	01/17/05	CD	0.25	1.5 x 2	Mouse trap	0	-12			2	2		01/18/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_97	421446.7059	3863357.881	75.1229	12.5542	10.0			11/28/04	10		-6	0	01/17/05	CD	0.25	10	Nail	-12	0			2	2		01/18/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005
S-19_C12	421441.3364	3863356.8	57.5	9		14	S-19_26	11/28/04			0	0		NC			checked with fisher and Schonstedt								1/26/06	rly	NA	DRA	02/22/06	NA	DRA	02/22/06
S-19_C14	421452.9488	3863357.692	95.6128	11.9389		12	S-19_19	11/28/04			0	0		CD	.5	8 x .25 x .25	metal stake, Rusted	0	0	NA	90	0	4	S19_C14 - #011	1/25/06	barn	YES	TF	01/26/06	YES	RVW	01/25/06
S-19_C15	421440.7273	3863359.085	55.5	16.5		12	S-19_18	11/28/04			0	0		CD	.2	96 x .25 x .25	barb wire, Rusted	0	0	NA	0	4	4	S19_C15 - #027	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_C19	421440.7271	3863357.562	55.5	11.5		11	S-19_23	11/28/04			0	0		NC			checked with Schonstedt and fisher								1/26/06	rly	NA	DRA	02/22/06	NA	DRA	02/22/06
S-19_C21	421440.2706	3863361.676	54	25		10	S-19_16	11/28/04			0	0		CD	.5	36 x .25 x .25	barb wire, Rusted	0	0	NA	0	3	3	S19_C21 - #028	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_C24	421449.8676	3863358.017	85.5	13		8	S-19_17	11/28/04			0	0		CD	.25	12 x .25 x .25	barb wire, Rusted	0	0	NA	0	2	2	S19_C24 - #013	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_C25	421450.9514	3863358.036	89.0572	13.0659		8	S-19_54	11/28/04			0	0		CD	1	50 x .25 x .25	barb wire, Rusted	0	0	NA	0	3	3	S19_C25 - #012	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_C26	421439.5146	3863371.334	51.5146	56.6919		8	S-19_25	11/28/04			0	0		CD	.25	.5 x .25 x .25	large nail, Rusted	0	0	W	0	2	2	S19_C26 - #018	1/25/06	barn	NA	DRA	02/22/06	YES	RVW	
S-19_C28	421423.8383	3863374.338	0.0548	66.5455		8	S-19_15	11/28/04			0	0		CD	.25	8 x .25 x .25	wire, Rusted	0	0	W	0	2	2	S19_C28 - #019	1/25/06	barn	NA	DRA	02/22/06	YES	RVW	
S-19_C34	421454.063	3863358.067	99.2697	13.1687		6	S-19_10	11/28/04			0	0		CD	.25	14 x .25 x .25	14in rod, Rusted	0	0	NA	0	6	6	S19_C34 - #007	1/24/06	rly	YES	RVW	01/25/06	YES	RVW	01/25/06
S-19_C35	421435.2443	3863366.4	37.5	40.5		6	S-19_45	11/28/04			0	0		CD	.25	12 x .25 x .25	wire, Rusted	0	0	NA	0	1	1	S19_C35 - #033	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_C36	421443.0452	3863358.124	63.1079	13.3469		6	S-19_24	11/28/04			0	0		CD	.5	8 x 1 x 1	steel angle, Rusted	0	0	NA	0	3	3	S19_C36 - #023	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_C37	421453.0668	3863356.339	96	7.5		6	S-19_33	11/28/04			0	0		CD	.25	24 x .25 x .25	wire, Rusted	0	0	NA	0	5	5	S19_C37 - #009	1/24/06	rly	YES	TF	01/26/06	YES	RVW	01/25/06
S-19_C4	421426.5589	3863355.889	9	6		23	S-19_4	11/28/04			0	0		NC			checked with em-61 still nc								1/25/06	barn	NA	DRA	02/22/06	NA	DRA	02/22/06
S-19_C40	421435.2442	3863365.943	37.5	39		5	S-19_64	11/28/04			0	0		CD	.25	10 x .25 x .25	wire, Rusted	0	0	NA	0	1	1	S19_C40 - #035	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_C41	421438.4878	3863360.532	48.1492	21.2451		5	S-19_20	11/28/04			0	0		CD	.25	4 x .25 x .25	nail, Rusted	0	0	NA	0	2	2	S19_C41 - #001/S19_C41b - #023	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_C46	421431.2096	3863371.722	24.2533	57.9612		4	S-19_48	11/28/04			0	0		CD	.5	28 x .25 x .25	wire, Rusted	0	0	NA	0	2	2	S19_C46 - #010	1/25/06	barn	NA	DRA	02/22/06	YES	RVW	
S-19_C48	421449.0794	3863357.58	82.9131	11.5656		4	S-19_46	11/28/04			0	0		CD	.25	.5 x .25 x .25	barb wire, Rusted	0	0	NA	0	2	2	S19_C48 - #016	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_C53	421453.2155	3863354.269	96.4882	0.7063		4	S-19_67	11/28/04			0	0		CD	.25	3 x .25 x .25	nails [5], Rusted	0	0	NA	0	2	2	S19_C53 - #004	1/24/06	rly	YES	TF	01/26/06	YES	RVW	01/25/06
S-19_C54	421438.4419	3863357.258	48	10.5		4	S-19_42	11/28/04			0	0		NC			checked with Schonstedt and fisher								1/26/06	rly	NA	DRA	02/22/06	NA	DRA	02/22/06
S-19_C56	421442.5531	3863374.112	61.4874	65.807		4	S-19_117	11/28/04			0	0		CD	.5	16 x .25 x .25	wire, Rusted	0	0	NE	15	1	1	S19_C56 - #009	1/25/06	barn	NA	DRA	02/22/06	YES	RVW	
S-19_C58	421427.0191	3863369.296	10.5	50		3	S-19_91	11/28/04			0	0		CD	.25	12 x .25 x .25	wire, Rusted	0	0	E	0	2	2	S19_C58 - #006	1/25/06	barn	NA	DRA	02/22/06	YES	RVW	
S-19_C60	421432.351	3863371.733	28	58		3	S-19_65	11/28/04			0	0		CD	.5	25 x .25 x .25	barbed wire, Rusted	0	0	SE	0	3	3	S19_C60 - #011	1/25/06	barn	NA	DRA	02/22/06	YES	RVW	
S-19_C61	421443.0635	3863358.854	63.1678	15.7421		3	S-19_24	11/28/04			0	0		CD	.25	3 x .25 x .25	nail, Rusted	0	0	NA	0	2	2	S19_C61 - #024	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_C62	421423.8182	3863361.679	0	25		3	S-19_41	11/28/04			0	0		NC			checked with em-61 still nc								1/25/06	barn	NA	DRA	02/22/06	NA	DRA	02/22/06
S-19_C65	421426.2761	3863369.446	8.0611	50.49		3	S-19_82	11/28/04			0	0		CD	.25	10 x .25 x .25	wire, Rusted	0	0	SE	0	2	2	S19_C65 - #005	1/25/06	barn	NA	DRA	02/22/06	YES	RVW	
S-19_C67	421440.6084	3863373.62	55.104	64.192		3	S-19_107	11/28/04			0	0		CD	.25	11 x .25 x .25	wire, Rusted	0	0	NA	0	2	2	S19_C67 #014	1/25/06	barn	NA	DRA	02/22/06	YES	RVW	
S-19_C7	421441.6036	3863355.57	58.3775	4.9638		19	S-19_11	11/28/04			0	0		CD	.25	5 x 2 x .25	hinge, Rusted	0	0	NA	0	3	3	S19_C7 - #025	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_C72	421450.516	3863354.4	87.6284	1.1348		3	S-19_55	11/28/04			0	0		CD	.25	3 x .25 x .25	nails[2], Rusted	0	0	NA	0	3	3	S19_C72 - #010	1/24/06	rly	YES	TF	01/26/06	YES	RVW	01/25/06
S-19_C74	421445.2978	3863363.504	70.5	31		3	S-19_152	11/28/04			0	0		CD	.25	12 x .25 x .25	wire, Rusted	0	0	NA	0	2	2	S19_C74 - #021	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_C76	421441.1849	3863372.531	56.9971	60.6191		2	S-19_77	11/28/04			0	0		CD	.5	30 x .25 x .25	wire, Rusted	0	0	NA	0	1	1	S19_C76 - #013	1/25/06	barn	NA	DRA	02/22/06	YES	RVW	

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: S19
Field Book ID:

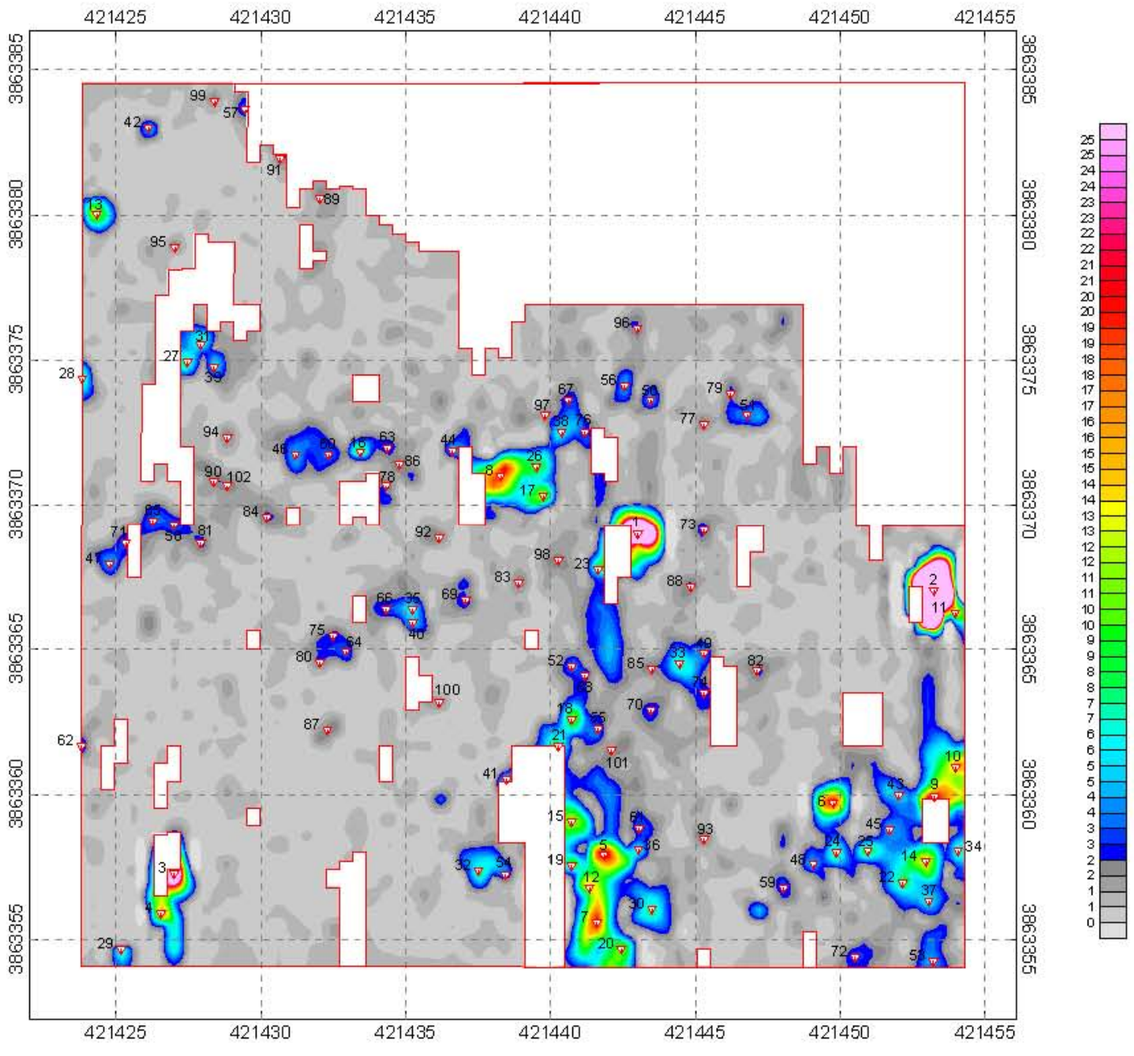
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	Chi^2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs)	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
S-19_C81	421427.933	3863368.687	13.5	48		2	S-19_91	11/28/04			0	0		CD	.25	14 x .25 x .25	barbed wire, Rusted	0	0	E	15	3	3	S19_C81 - #003	1/25/06	bam	NA	DRA	02/22/06	YES	RVW	
S-19_C85	421443.4836	3863364.347	64.5451	33.7659		2	S-19_34	11/28/04			0	0		CD	.25	8 x .25 x .25	nail, Rusted	0	0	NA	0	0	0	S19_C85 - #031	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_C9	421453.2648	3863359.94	96.65	19.3148		18	S-19_9	11/28/04			0	0		CD	.25	10 x .25 x .25	10ln. wire, Rusted	0	0	NA	0	4	4	S19_C9 - #005	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-19_C97	421439.815	3863373.104	52.5	62.5		2	S-19_58	11/28/04			0	0		CD	.25	5 x .25 x .25	wire, Rusted	0	0	NE	0	2	2	S19_C97 - #015	1/25/06	bam	NA	DRA	02/22/06	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)

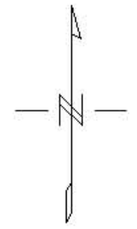
NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys



Legend

Area of Investigation

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



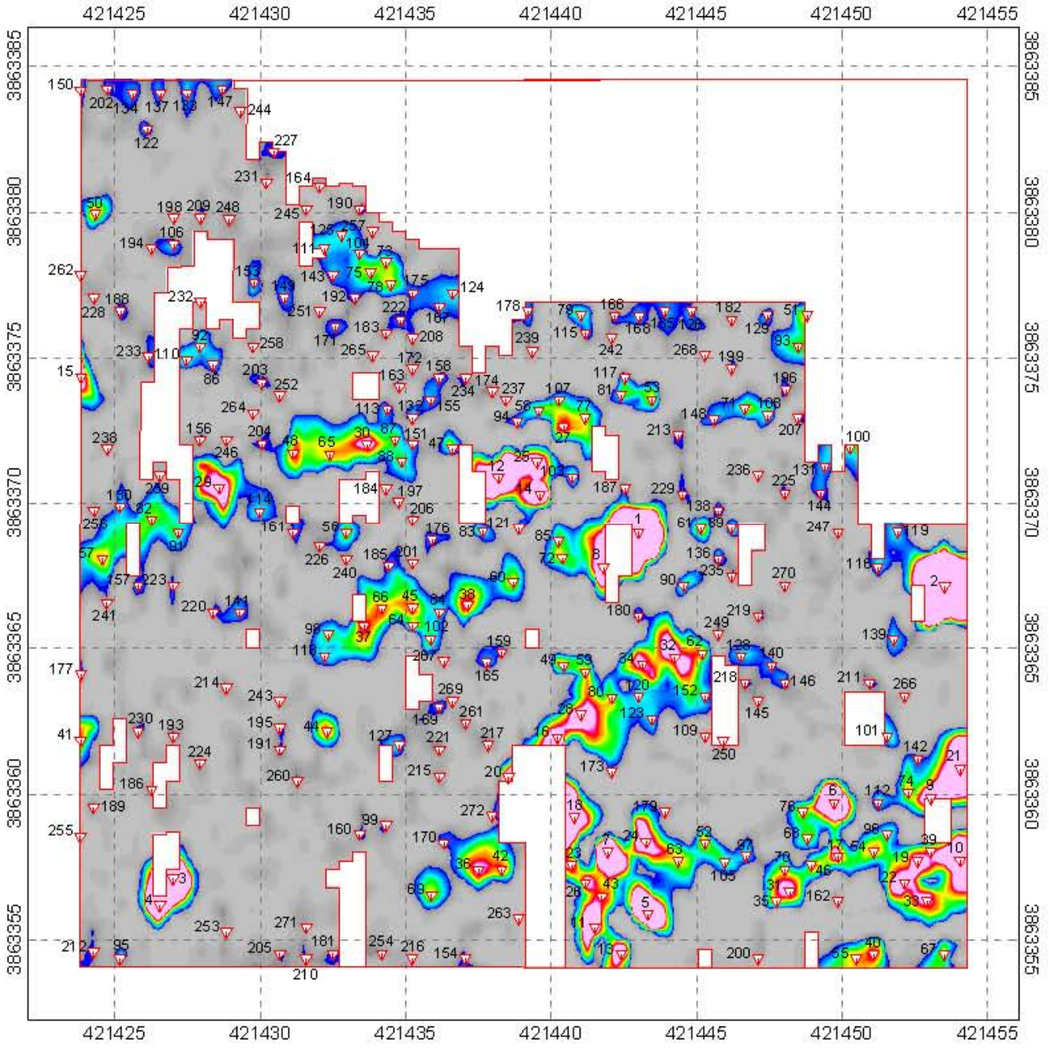
Scale 1:180

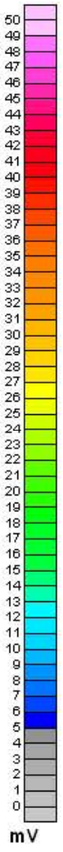
2.5 0 2.5 5 7.5 10

metres

NAD83 / UTM zone 17N

Zapata Engineering
EM61 MK2 Chi2 Grid S-19 Camp Croft, South Carolina
Date of Survey: November 28, 2004



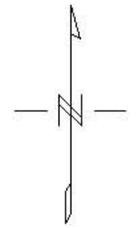


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

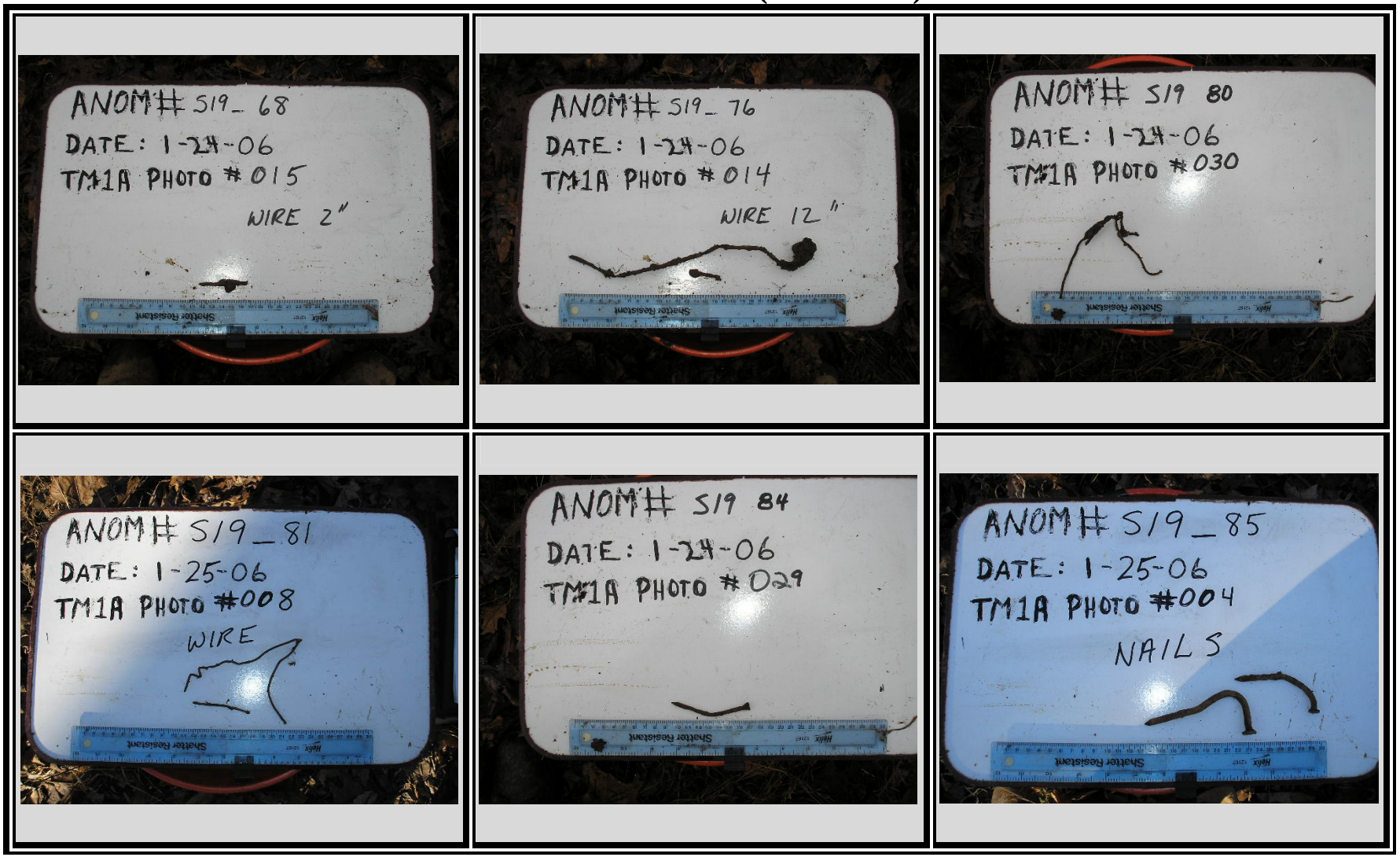
Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid S-19
Camp Croft, South Carolina

Date(s) of Survey: November 28, 2004

GRID S19 DIG PHOTOS

GRID S19 DIG PHOTOS (CONTINUED)



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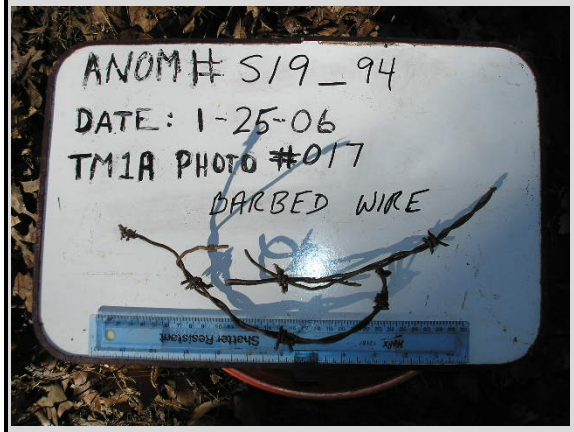

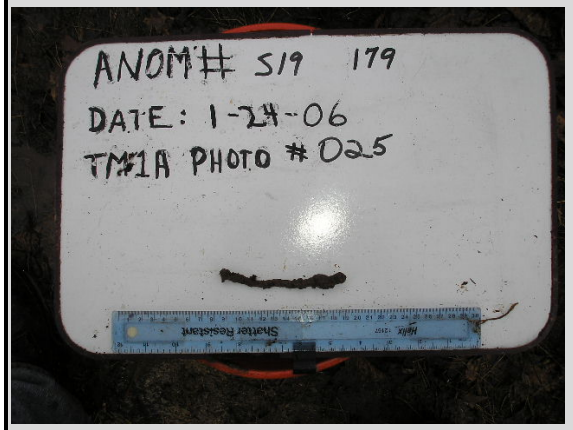

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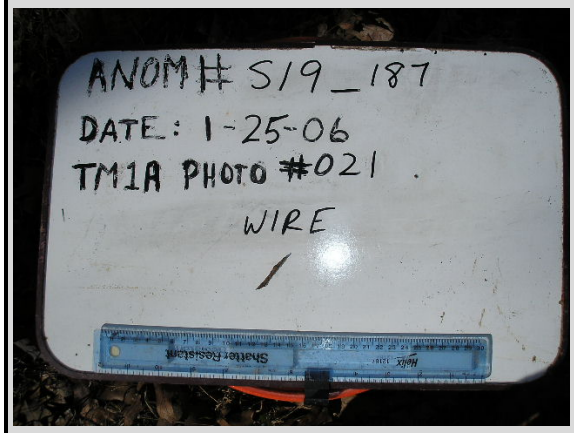

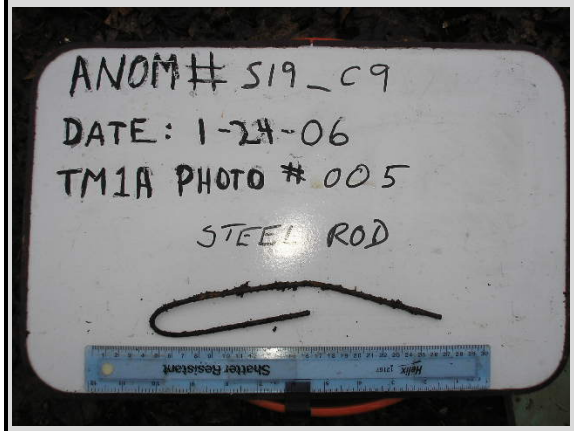

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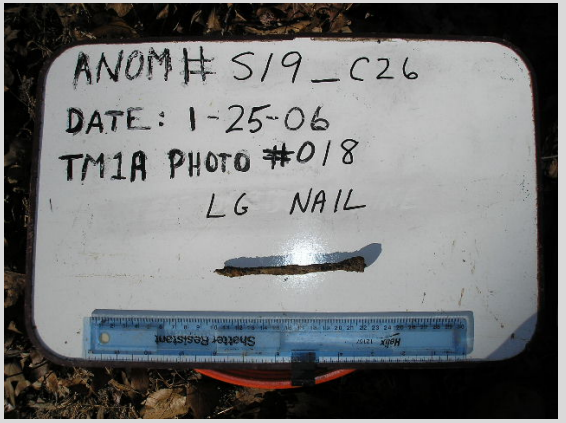
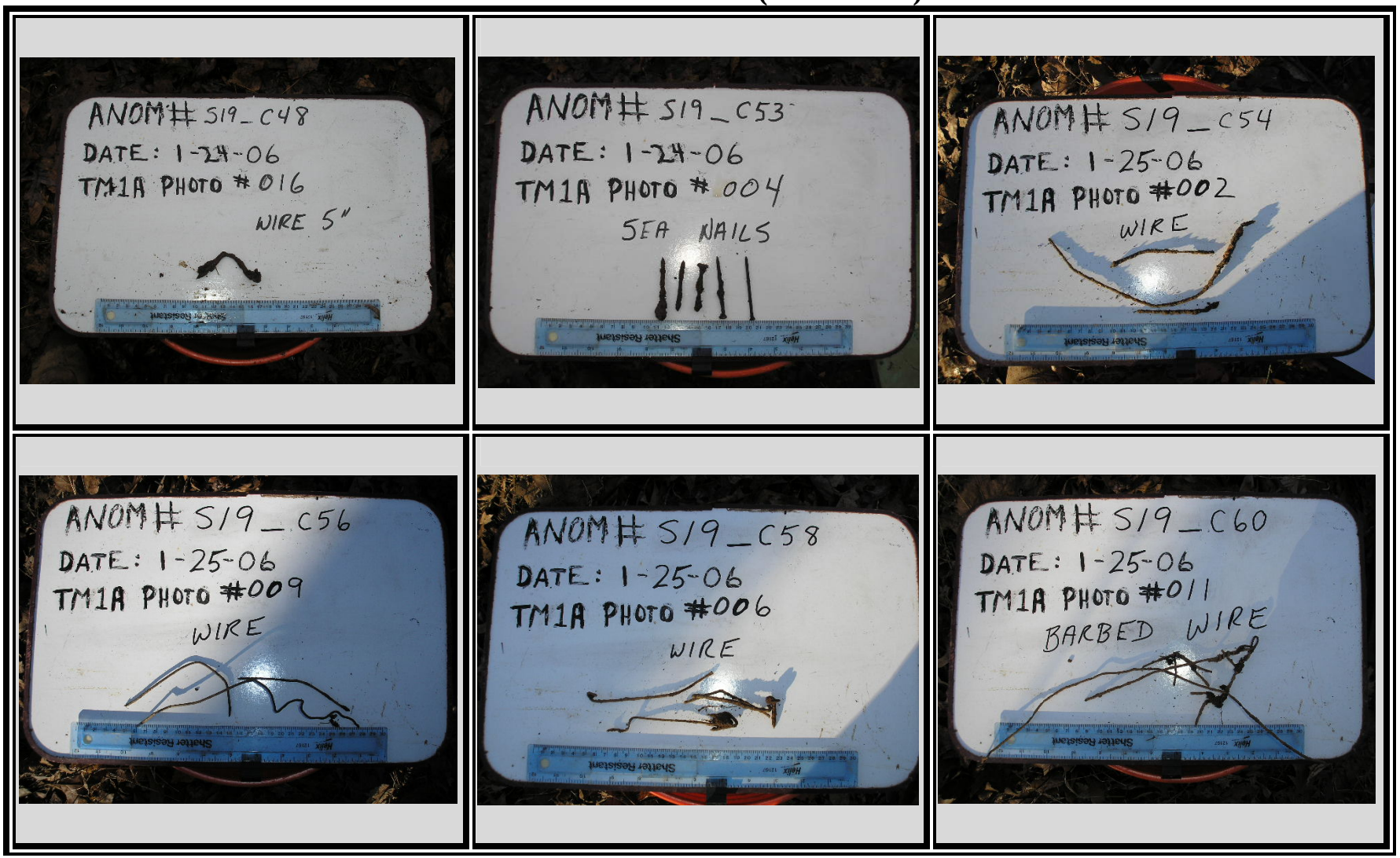


GRID S19 DIG PHOTOS (CONTINUED)

GRID S19 DIG PHOTOS (CONTINUED)



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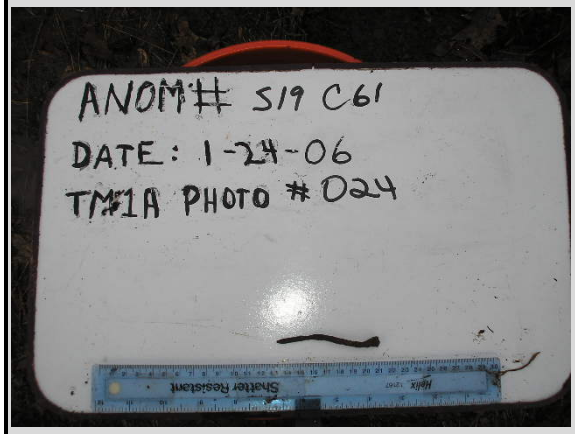

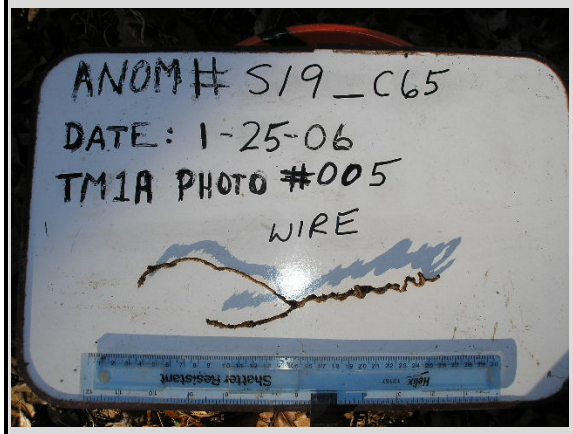

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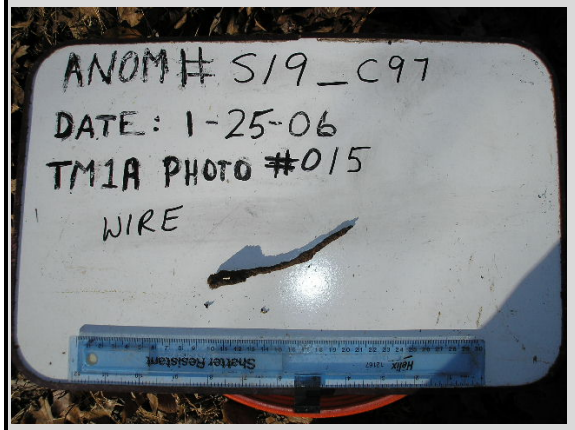


ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: S20
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
S-20_1	421459.3147	3863362.435	16.5	27.5	983.0		S-20_C1	11/28/04	618		60	0	01/08/05	CD	0.5	48	1/2 conduit						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_10	421457.3335	3863361.825	10	25.5	63.0		S-20_C8	11/28/04	128		12	0	01/08/05	CD	0.25	120	Wire						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_11	421464.9535	3863357.101	35	10	40.0		S-20_C33	11/28/04	43		0	-18	01/08/05	CD	0.25		2 nails						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_12	421460.9435	3863361.127	21.8437	23.2095	39.0		S-20_C40	11/28/04	35		-6	6	01/08/05	GEO			Rock						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_13	421463.8867	3863358.015	31.5	13	33.0		S-20_C29	11/28/04	51		0	-6	01/08/05	CD	0.25	7	Nail						8		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_14	421460.2945	3863365.634	19.7147	37.9945	27.0		S-20_C25	11/28/04	50		6	6	01/08/05	CD	0.25	8	Tin						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_15	421460.8387	3863364.873	21.5	35.5	29.0		S-20_C24	11/28/04	45		-6	6	01/08/05	CD	0.25	12	Wire	0	18				0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_18	421457.6383	3863366.245	11	40	23.0			11/28/04	38		6	12	01/08/05	CD		5	Nail	0	0				0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_20	421462.2103	3863356.187	26	7	25.0		S-20_C13	11/28/04	32		0	0	01/08/05	CD	0.25	30	Wire						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_22	421457.0287	3863357.863	9	12.5	19.0			11/28/04			0	0		CD	.25	11 x .25 x .25	wire, Rusted	0	0	NE	15	4	4	S20_22 - #041	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
S-20_23	421460.9911	3863359.844	22	19	17.0			11/28/04	28		6	0	01/08/05	CD	0.25		Wire bracket	6	0							RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_24	421457.4859	3863357.101	10.5	10	16.0			11/28/04	42		0	0	01/08/05	CD	0.25		1/2 pin	-6	0				2		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_25	421465.2583	3863360.454	36	21	21.0		S-20_C17	11/28/04	16		0	0	01/08/05	CD	0.25	8	Wire	0	-12				2		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_26	421456.2667	3863355.577	6.5	5	13.0			11/28/04	13		0	0	01/08/05	CD	0.25	3	Nail	12	0				1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_27	421463.7343	3863355.425	31	4.5	17.0		S-20_C36	11/28/04	21		-6	-6	01/08/05	CD	0.25	12	Wire						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_28	421462.2103	3863359.844	26	19	15.0			11/28/04			0	0		CD	.25	3 x .25 x .25	wire, Rusted	0	0	NE	30	3	3	S20_28 - #037	1/23/06	barn	YES	TF	01/26/06	YES	RVW	01/25/06
S-20_29	421458.2479	3863358.625	13	15	15.0		S-20_C21	11/28/04	21		0	0	01/08/05	CD	0.25		Wire	-8.486563	8.4865629				2		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_3	421467.8969	3863358.582	44.657	14.8598	107.0		S-20_C14 / S-20_(	11/28/04	150		-6	-6	01/08/05	CD	0.5	2 x 4	Flange	-6	0			0	1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_30	421463.5819	3863359.997	30.5	19.5	14.0		S-20_C34	11/28/04	21		6	12	01/08/05	GEO			Rock						2		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_32	421462.1529	3863357.085	25.8115	9.9486	13.0			11/28/04			0	0		CD	.25	10 x .25 x .25	wire, Rusted	0	0	NE	0	3	3	S20_32 - #035	1/23/06	barn	YES	TF	01/26/06	YES	RVW	01/25/06
S-20_33	421456.5994	3863359.074	7.5914	16.4731	11.0			11/28/04			0	0		CD	.25	3 x .25 x .25	nail, Rusted	0	0	NA	0	6	6	S20_33 - #001	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-20_35	421457.1811	3863354.815	9.5	2.5	8.0			11/28/04	10		12	0	01/08/05	GEO			Rock						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_36	421461.1346	3863356.051	22.4707	6.5536	9.0			11/28/04			0	0		CD	.5	20 x .5 x .5	large metal spring, Rusted	0	0	S	0	5	5	S20_36 - #044	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
S-20_38	421456.2667	3863367.312	6.5	43.5	6.0			11/28/04	3		6	12	01/08/05	GEO			Rock						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_4	421462.0579	3863363.349	25.5	30.5	102.0		S-20_C4	11/28/04	71		6	-12	01/08/05	CD	0.25	72	Wire						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_40	421459.3147	3863355.729	16.5	5.5	7.0			11/28/04	5		-12	0	01/08/05	CD	0.25	3	Nail						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_44	421468.0015	3863357.29	45	10.62	5.0			11/28/04			0	0		CD	.25	3 x .25 x .25	wire, Rusted	0	0	NA	0	2	2	S20_44 - #020	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
S-20_46	421460.2291	3863358.473	19.5	14.5	6.0			11/28/04	5		12	12	01/08/05	CD	0.25	2 x 2	Metal	12	0				0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_8	421454.5784	3863360.745	0.961	21.955	67.0		S-20_C2	11/28/04	150		0	0	01/08/05	CD	0.25	72	Wire						0		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_9	421454.467	3863357.435	0.5955	11.0957	55.0		S-20_C16	11/28/04	34		-12	0	01/08/05	CD			Brick						1		01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-20_C10	421455.6939	3863360.079	4.6207	19.7699		8	S-20_5	11/28/04			0	0		CD	.25	5 x .25 x .25	5 in wire, Rusted	0	0	NA	0	2	2	S20_C10 - #003	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-20_C12	421458.9094	3863364.957	15.1704	35.7743		7	S-20_7	11/28/04			0	0		CD	.25	24 x .25 x .25	barbed wire, shared with s20-c5, Rusted	0	0	SE	0	4	4	S20_C12 - #039	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
S-20_C15	421455.1999	3863361.521	3	24.5		6	S-20_16	11/28/04			0	0		CD	.25	3 x .25 x .25	nail, Rusted	0	0	NA	0	4	4	S20_C15 - #006	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-20_C19	421459.3147	3863360.606	16.5	21.5		4		11/28/04			0	0		CD	.5	24 x .25 x .25	filter and 24 in barbed wire, Rusted	0	0	SE	15	5	5	S20_C19 - #036	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
S-20_C20	421454.2855	3863358.473	0	14.5		4	S-19_10	11/28/04			0	0		CD	.25	10 x .25 x .25	wire, Rusted	0	0	NA	0	4	4	S20_C20 - #008	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-20_C26	421469.3731	3863358.93	49.5	16		3		11/28/04			0	0		CD	.25	4 x .25 x .25	nail, Rusted	0	0	NA	0	5	5	S20_C26 - #018	1/26/06	rly	YES	TF	01/26/06	YES	RVW	01/25/06
S-20_C28	421477.6027	3863355.577	76.5	5		3	S-20_21	11/28/04			0	0		CD	.1	3 x .1 x .1	4 pieces of wire, Rusted	0	0					S20_C28 - #002	1/30/06	sfr	NA	DRA	02/22/06	YES	RVW	
S-20_C3	421458.1786	3863363.112	12.7728	29.7202		20	S-20_2	11/28/04			0	0		CD	.1	01 x 1 x 1	NAIL AND WIRE, Rusted	0	0	NE	0	0	0	S20_C3 - #003	1/30/06	sfr	YES	TF	01/30/06	YES	RVW	01/25/06
S-20_C30	421457.9431	3863359.692	12	18.5		3	S-20_34	11/28/04			0	0		CD	.5	4 x 4 x .25	metal disc, Rusted	0	0	NA	15	5	5	S20_C30 - #042	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	
S-20_C31	421460.8387	3863362.283	21.5	27		3		11/28/04			0	0		CD	.1	5 x 2 x 1.5	part of fence post, Rusted	0	0	NE	15	5	5	S20_C31 - #040	1/23/06	barn	NA	DRA	02/22/06	YES	RVW	

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

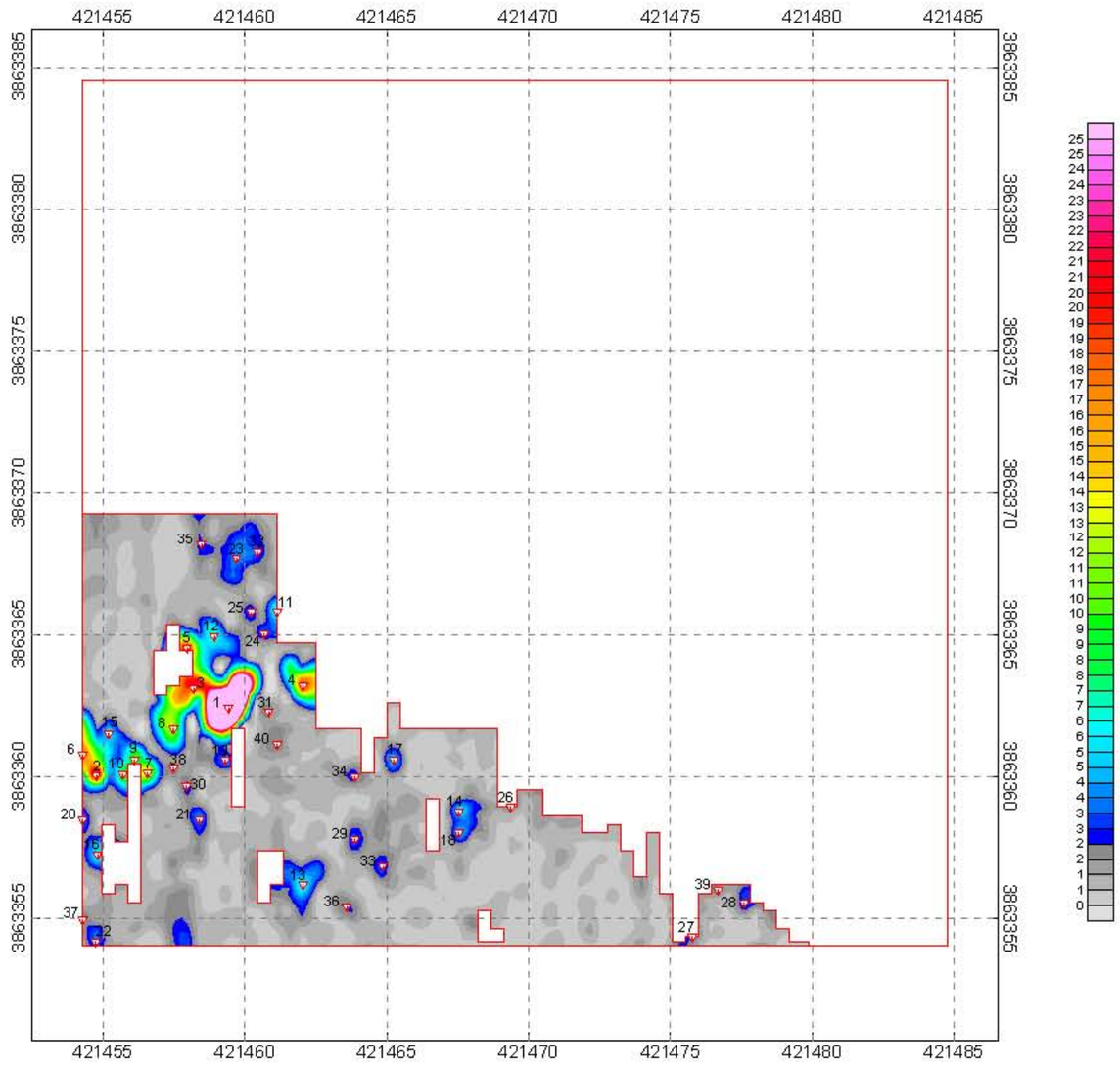
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: S20
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	Chi^2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs)	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
S-20_C38	421457.4859	3863360.301	10.5	20.5		2	S-20_34	11/28/04			0	0		CD	.25	6 x .25 x .25	barbed wire, Rusted	0	0	S	0	3	3	S20_C38 - #043	1/23/06	bam	YES	TF	01/26/06	YES	RVW	01/25/06
S-20_C39	421476.6883	3863356.034	73.5	6.5		2	S-20_21	11/28/04			0	0		CD	.25	6 x .25 x .25	nail, Rusted	0	0	NA	0	2	2	S20_C39 - #017	1/26/06	rly	NA	DRA	02/22/06	YES	RVW	
S-20_C5	421457.9594	3863364.537	12.0535	34.3956		19	S-20_7	11/28/04			0	0		CD	.25	24 x .25 x .25	barbed wire, Rusted	0	0	SE	0	4	4	S20_C5 - #039	1/23/06	bam	NA	DRA	02/22/06	YES	RVW	
S-20_C7	421456.5715	3863360.149	7.5	20		15	S-20_5	11/28/04			0	0		CD	.25	15 x .25 x .25	rod, 15 in., 6 in. wire, Rusted	0	0	NA	0	8	8	S20_C7 - #002	1/24/06	rly	NA	DRA	02/22/06	YES	RVW	
S-20_C9	421456.1143	3863360.606	6	21.5		11	S-20_5	11/28/04			0	0		CD	.25	30 x .25 x .25	wire, Rusted	0	0	E	15	5	5	S20_C9 - #045	1/23/06	bam	NA	DRA	02/22/06	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)



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)

Scale 1:180

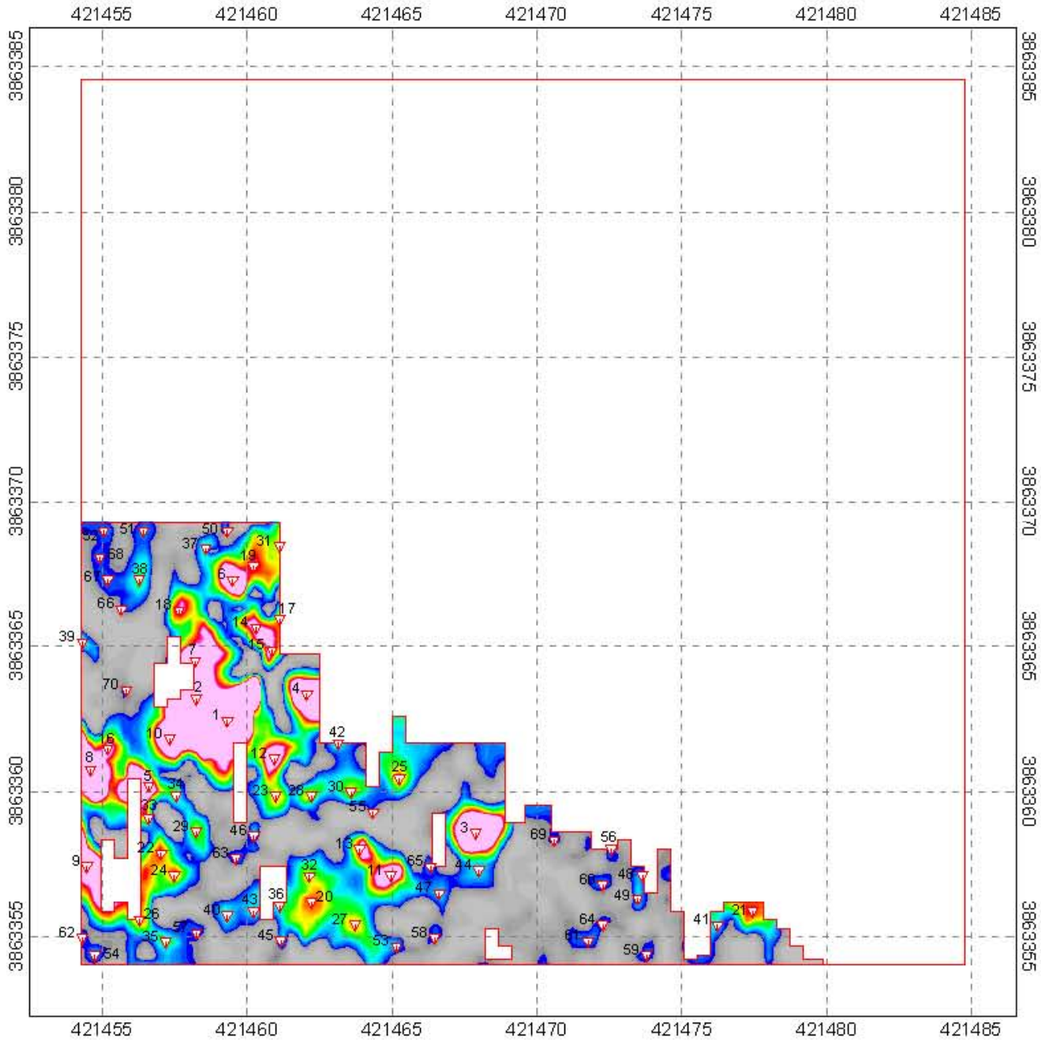
2.5 0 2.5 5 7.5 10
metres

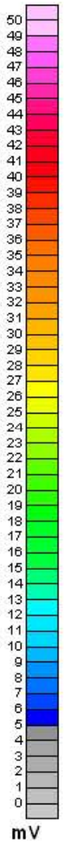
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid S-20
Camp Croft, South Carolina

Date of Survey: November 28, 2004





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)

Scale 1:180

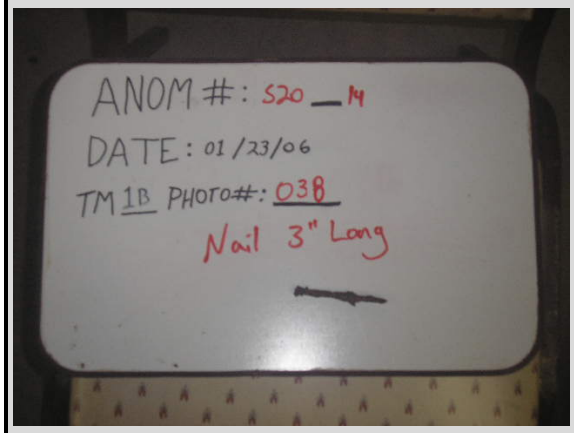
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

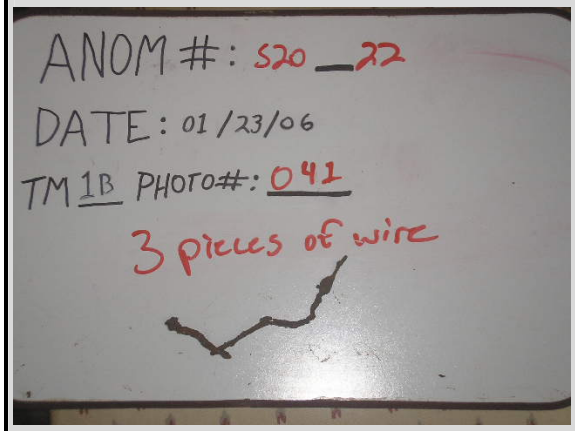
Zapata Engineering

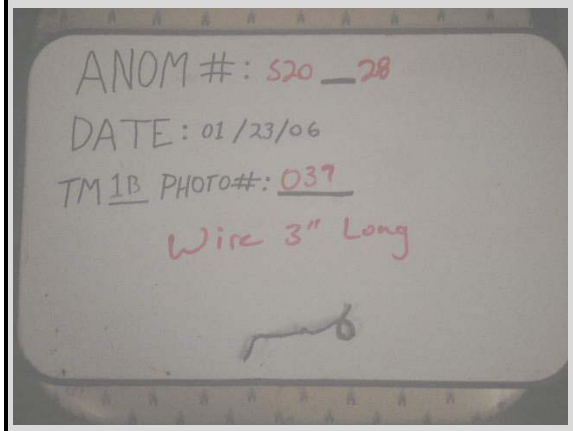
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid S-20
Camp Croft, South Carolina

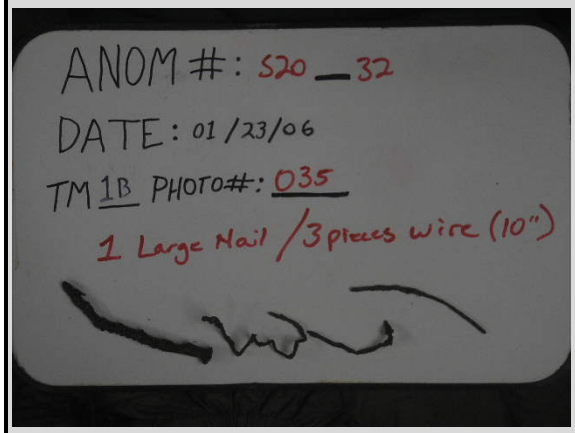
Date(s) of Survey: November 28, 2004

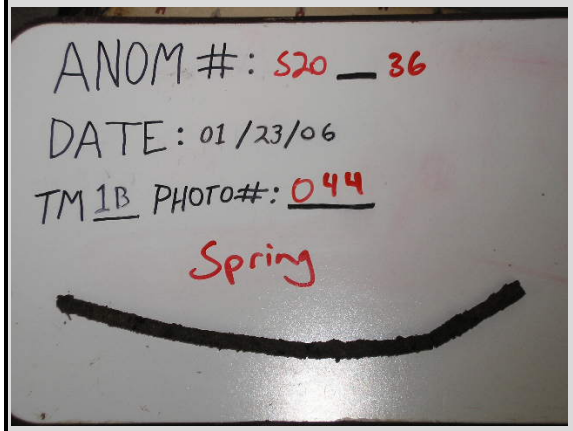
GRID S20 DIG PHOTOS











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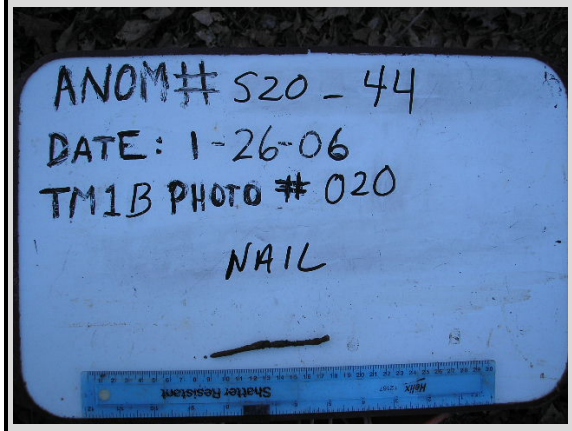

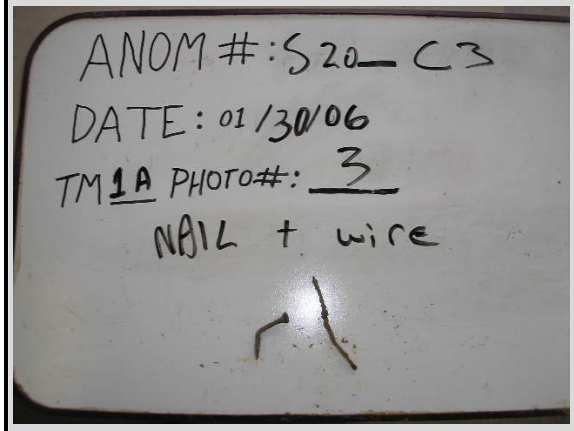

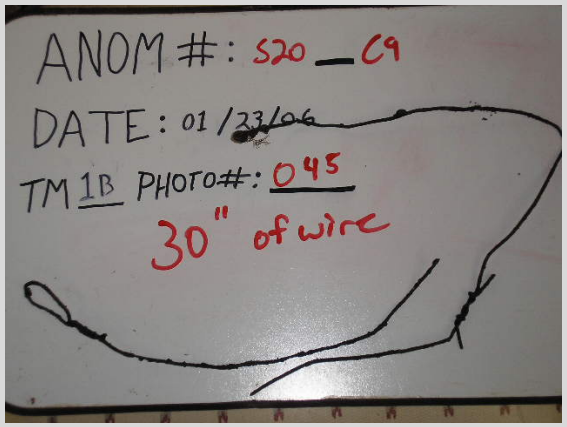

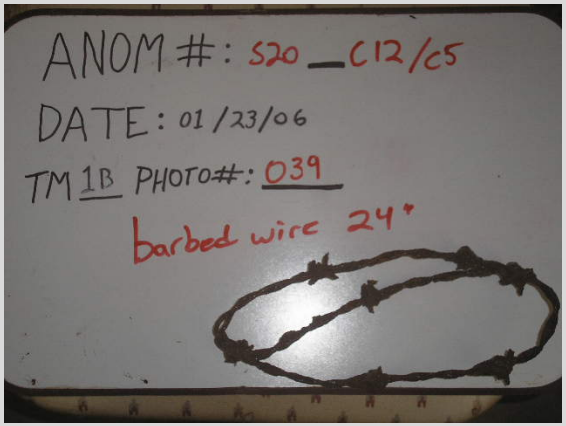

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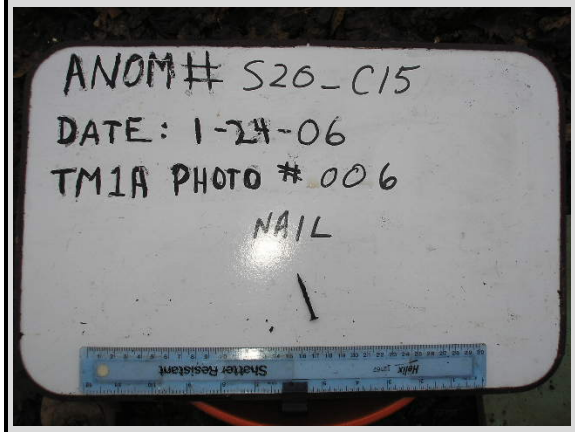

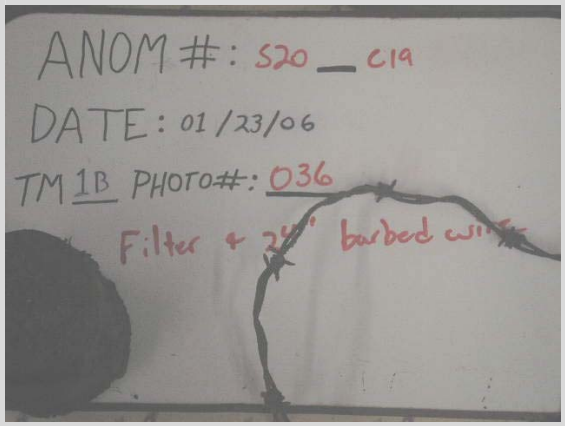

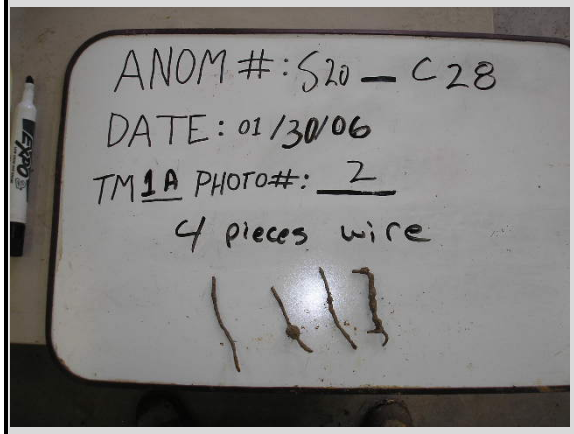

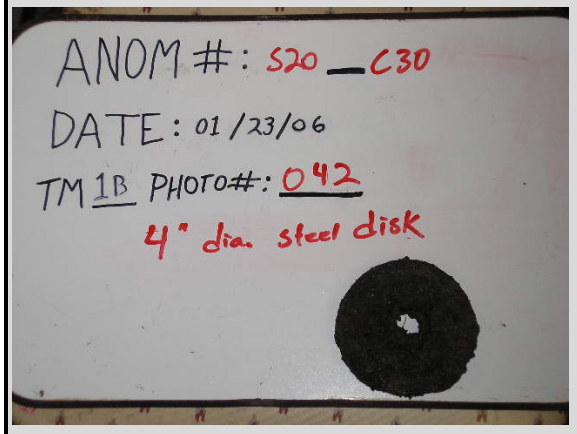

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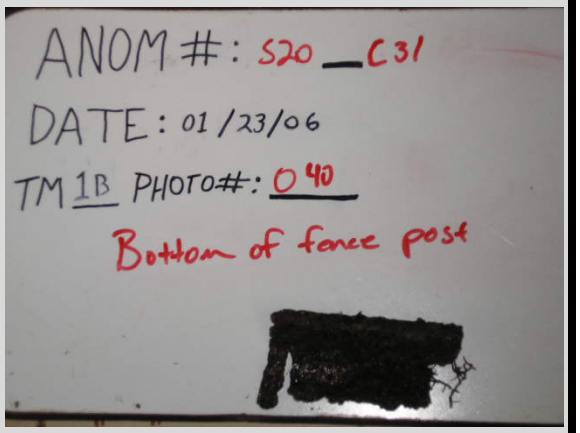
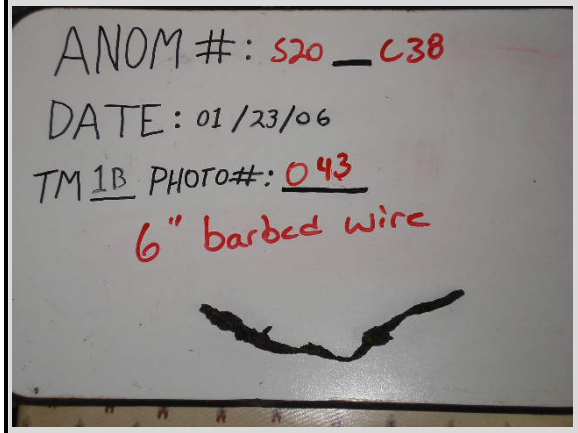




ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: T15
Field Book ID:

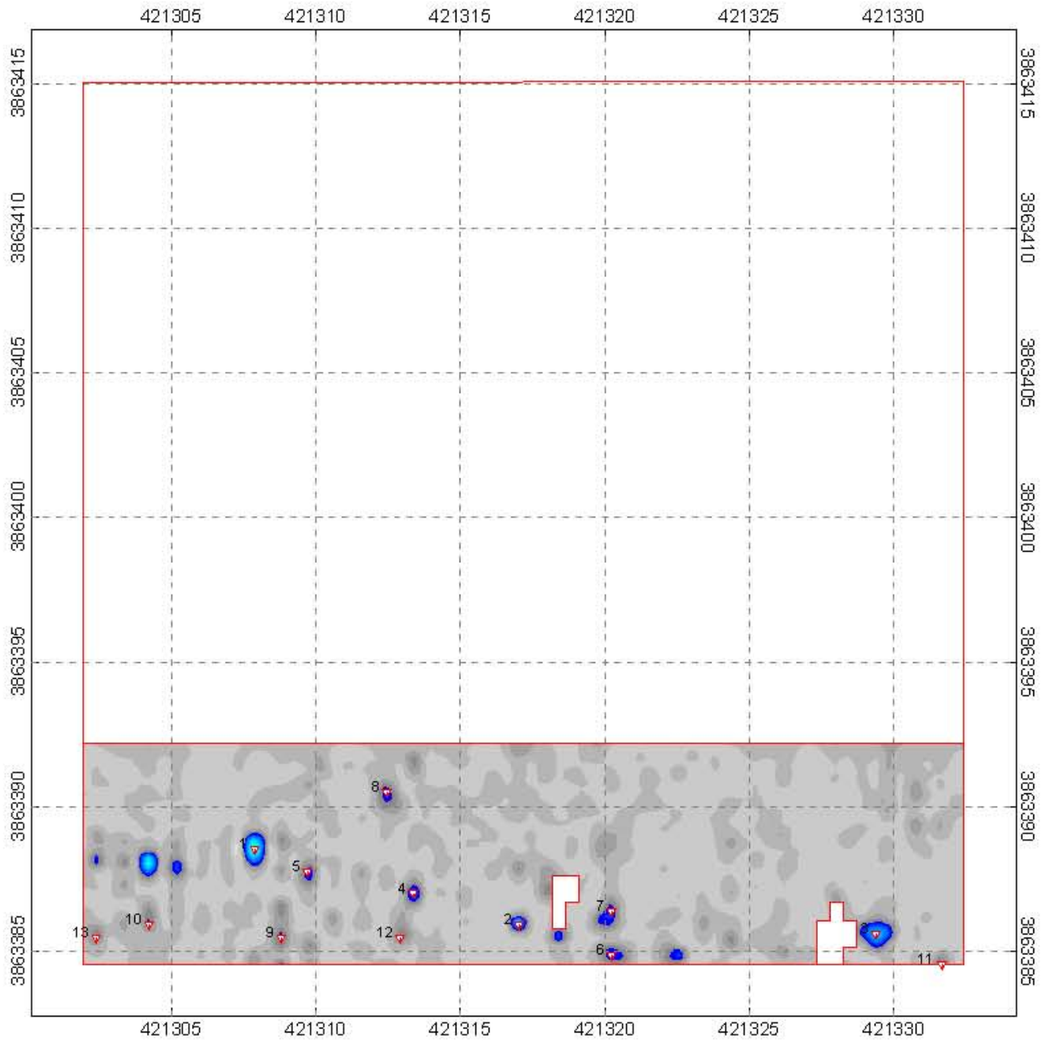
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

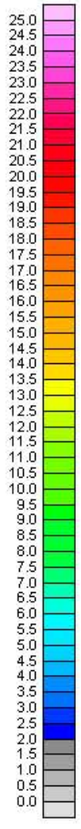
Geophysical Equipment Used	Component	Serial #	Grid Background Value (mV / nT)	Date	Time

	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)	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)	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
T-15_10	421303.7754	3863384.935	6	1.22	10.0			11/20/04	14		0	0	01/10/05	GEO	15	12 x 12 x 12	Geo soil - Geo confirmed during QC					0	6		01/19/05	DRG	Yes	HEL	01/24/05	YES	AJP	3/5/2005
T-15_11	421305.6036	3863385.02	12	1.5	9.0			11/20/04	14		0	0	01/10/05	GEO	15	12 x 12 x 12	Geo soil - Geo confirmed during QC					0	6		01/19/05	DRG	Yes	HEL	01/24/05	YES	AJP	3/5/2005
T-15_13	421308.8029	3863385.477	22.5	3	7.0		T-15_C9	11/20/04	12		0	6	01/10/05	GEO	20	12 x 12 x 18	Geo soil	-4.243281	-4.243281			0	9		01/20/05	DRG	Yes	HEL	01/25/05	YES	AJP	3/5/2005
T-15_15	421324.3422	3863386.083	73.5	5	7.0			11/20/04	15		0	0	01/10/05	CD	15	12 x 12 x 12	Geo soil - poss can	-4.243281	-4.243281			0	6		01/20/05	DRG	Yes	HEL	01/25/05	YES	AJP	3/5/2005
T-15_16	421314.2874	3863387.305	40.5	9	8.0			11/20/04	5.5		0	6	01/10/05	GEO	60	36 x 12 x 12	Geo soil					0	6		01/20/05	DRG	Yes	HEL	01/25/05	YES	AJP	3/5/2005
T-15_19	421319.1718	3863387.766	56.5306	10.5121	7.0			11/20/04	10		0	-6	01/10/05	GEO	60	24 x 12 x 216	Geo soil					0	9		01/20/05	DRG	Yes	HEL	01/25/05	YES	AJP	3/5/2005
T-15_27	421320.4281	3863387.514	60.6537	9.6874	6.0			11/20/04	9		0	-6	01/10/05	GEO	15	12 x 12 x 12	Geo soil					0	6		01/19/05	DRG	Yes	HEL	01/25/05	YES	AJP	3/5/2005
T-15_29	421328.9681	3863387.074	88.6819	8.2513	6.0			11/20/04	16		30	0	01/10/05	GEO	20	12 x 12 x 216	Geo soil					0	9			DRG	Yes	HEL	01/25/05	YES	AJP	3/5/2005
T-15_39	421330.7607	3863388.198	94.5652	11.9351	5.0			11/20/04	6		0	0	01/10/05	GEO	15	12 x 12 x 12	Geo soil - Geo confirmed during QC					0	6		01/19/05	DRG	Yes	HEL	01/24/05	YES	AJP	3/5/2005
T-15_5	421313.3733	3863387	37.5	8	7.0		T-15_C4	11/20/04	5		-6	6	01/10/05	GEO	80	336 x 216 x 27	Geo soil					0	14		01/20/05	DRG	Yes	HEL	01/25/05	YES	AJP	3/5/2005
T-15_8	421321.8016	3863385.401	65.1617	2.7605	8.0			11/20/04	18		-6	12	01/10/05	GEO	20	18 x 12 x 12	Geo soil - Geo confirmed during QC	6	0			0	6		01/20/05	DRG	Yes	HEL	01/24/05	YES	AJP	3/5/2005

* 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)

N

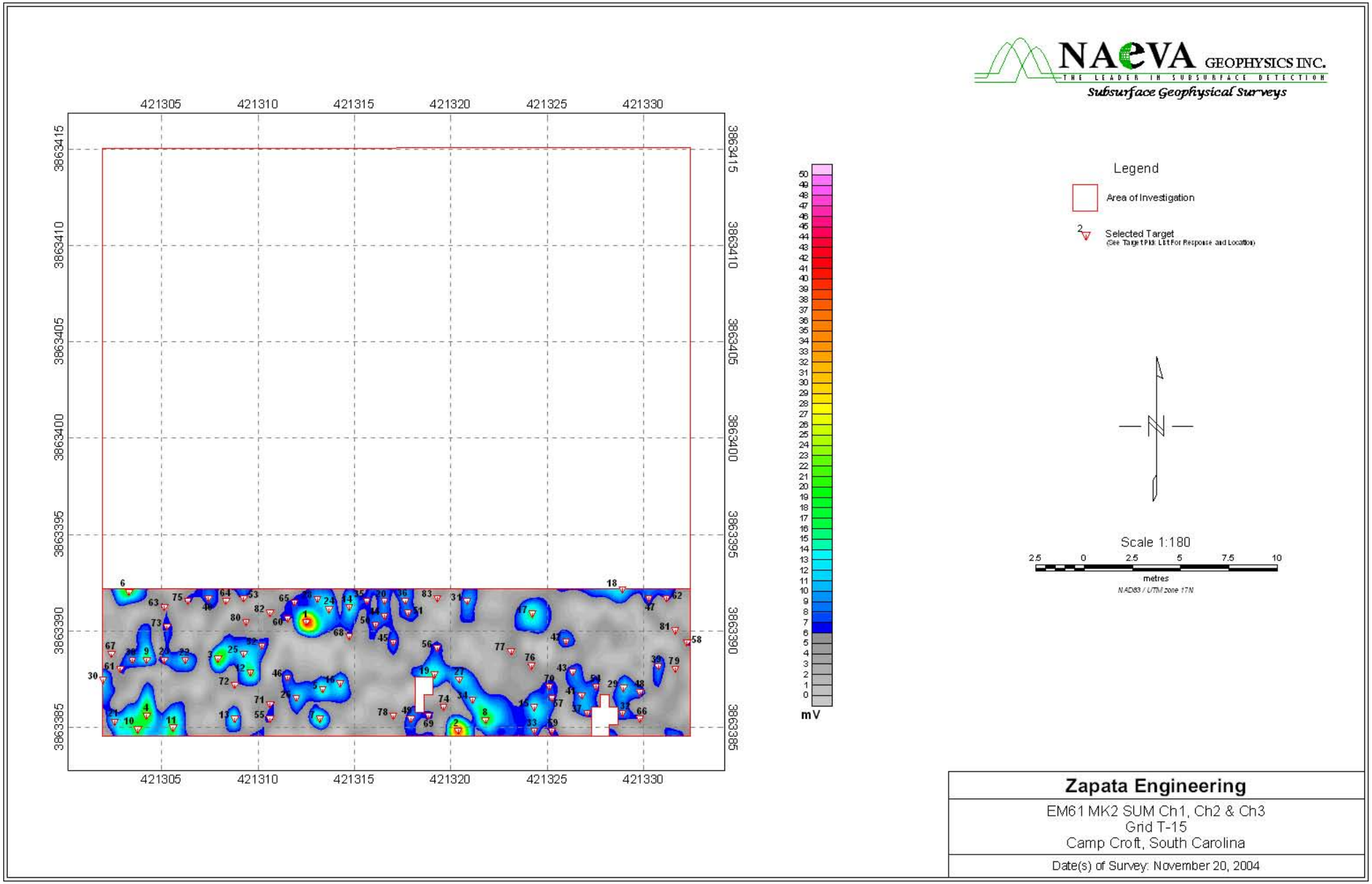
Scale 1:180

2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid T-15
Camp Croft, South Carolina

Date of Survey: November 20, 2004


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
421305
421310
421315
421320
421325
421330
3863415
3863410
3863405
3863400
3863395
3863390
3863385
mV
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Scale 1:180
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid T-15
Camp Croft, South Carolina
Date(s) of Survey: November 20, 2004

ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: T16
Field Book ID:

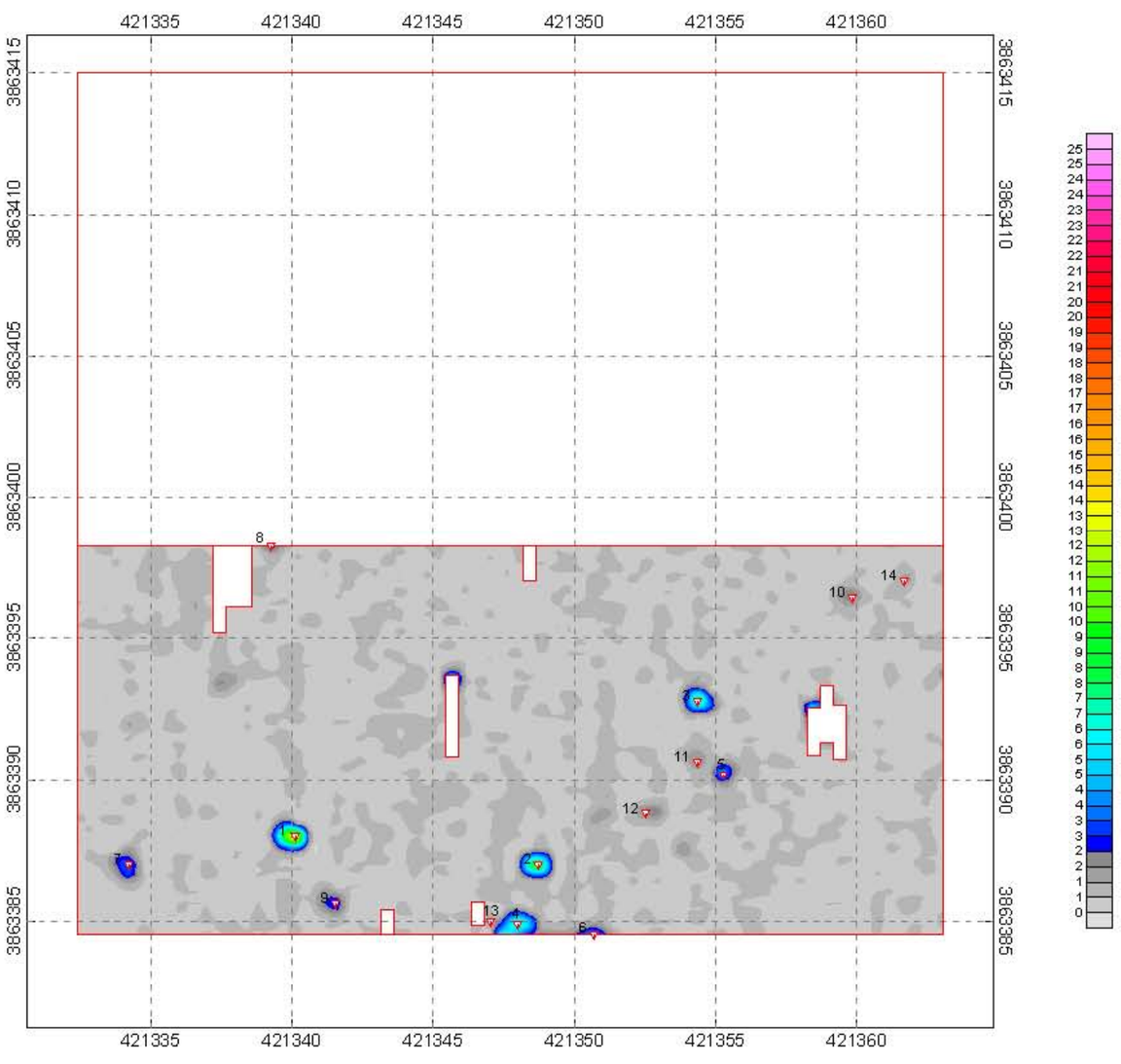
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
T-16_1	421334.0931	3863386.993	5.5	8	29.0		T-16_C7	11/20/04	42		0	0	01/11/05	MD	0.5	2 x 2	Fuze/top W.P. grenade	-4	0			0	1		01/17/05	DRG	Yes	HEL	01/24/05	YES	AJP	3/5/2005
T-16_10	421348.8707	3863386.989	54	8	21.0		T-16_C2	11/20/04	30		-12	0	01/11/05	GEO	16	12 x 12 x 12	Geo soil/rock	0	8			0	6		01/17/05	DRG	Yes	HEL	01/25/05	YES	AJP	3/5/2005
T-16_13	421357.5547	3863387.9	82.5	11	12.0			11/20/04	12		-6	0	01/11/05	GEO	15	12 x 12 x 12	Geo soil	-3.536068	3.5360679			0	6		01/17/05	DRG	Yes	HEL	01/25/05	YES	AJP	3/5/2005
T-16_14	421358.0115	3863386.986	84	8	10.0			11/20/04	14		-6	-6	01/11/05	GEO	15	12 x 12 x 12	Geo soil	0	-6			0	6		01/17/05	DRG	Yes	HEL	01/25/05	YES	AJP	3/5/2005
T-16_18	421344.7571	3863391.807	40.4949	23.8101	9.0			11/20/04	6		0	0	01/11/05	GEO	20	18 x 12 x 12	Geo soil/rock - Geo confirmed during QC	5.6577086	-5.657709			0	6		01/17/05	DRG	Yes	HEL	01/24/05	YES	AJP	3/5/2005
T-16_19	421339.7296	3863386.077	24	5	9.0			11/20/04	11		0	-12	01/11/05	CD	0.25	3 x 0.25	Old nail	-6	0			6	6		01/19/05	DRG	Yes	HEL	01/25/05	YES	AJP	3/5/2005
T-16_20	421354.3567	3863392.776	72	27	16.0		T-16_C3	11/20/04	27		0	-6	01/11/05	GEO	15	18 x 12 x 12	Geo soil	-6	0			0	6		01/17/05	DRG	Yes	HEL	01/25/05	YES	AJP	3/5/2005
T-16_21	421337.9011	3863384.707	18	0.5	7.0			11/20/04	10		0	0	01/11/05	GEO	15	12 x 12 x 12	Geo soil					0	6		01/19/05	DRG	Yes	HEL	01/25/05	YES	AJP	3/5/2005
T-16_22	421350.6993	3863388.664	60	13.5	5.0			11/20/04	8		-6	-6	01/11/05	GEO	16	12 x 12 x 12	Geo soil/rock	0	6			0	6		01/17/05	DRG	Yes	HEL	01/25/05	YES	AJP	3/5/2005
T-16_23	421355.2697	3863388.663	75	13.5	7.0			11/20/04	7		-12	6	01/11/05	CD	0.25	5 x 0.125	Old nail	8	0			5	5		01/17/05	DRG	Yes	HEL	01/25/05	YES	AJP	3/5/2005
T-16_24	421344.7584	3863391.103	40.5	21.5	7.0			11/20/04	6		0	0	01/11/05	GEO	15	12 x 12 x 12	Geo soil - Geo confirmed during QC					0	6		01/17/05	DRG	Yes	HEL	01/24/05	YES	AJP	3/5/2005
T-16_25	421357.5568	3863395.67	82.5	36.5	5.0			11/20/04	11		0	0	01/11/05	GEO	15	12 x 12 x 12	Geo soil	4.2432815	4.2432815			0	6		01/17/05	DRG	Yes	HEL	01/25/05	YES	AJP	3/5/2005
T-16_29	421353.7459	3863387.597	70	10	7.0			11/20/04	10		9	-6	01/11/05	GEO	15	12 x 12 x 12	Geo soil	0	5			0	6		01/17/05	DRG	Yes	HEL	01/25/05	YES	AJP	3/5/2005
T-16_33	421337.4452	3863388.82	16.5	14	5.0			11/20/04	13		0	0	01/11/05	GEO	10	15 x 1 x 6	Geo soil	5.6577086	-5.657709			0	3		01/17/05	DRG	Yes	HEL	01/25/05	YES	AJP	3/5/2005
T-16_4	421347.956	3863384.856	51	1	22.0		T-16_C4	11/20/04	42		0	0	01/11/05	MD	0.5	8 x 2	W.P. grendade body	-12	0			0	0.5		01/17/05	DRG	Yes	HEL	01/25/05	YES	AJP	3/5/2005
T-16_5	421340.0957	3863387.983	25.1999	11.2534	28.0		T-16_C1	11/20/04	57		-9	0	01/11/05	CD	0.25	2 x 2	Crush aluminum can - poss can	5.6577086	-5.657709			0	0		01/17/05	DRG	Yes	HEL	01/25/05	YES	AJP	3/5/2005
T-16_9	421341.5577	3863385.62	30	3.5	18.0		T-16_C9	11/20/04	20		0	0	01/11/05	MD	1	2 x 2	M69 mortar tails (2)	-5.657709	5.6577086			12	14		01/17/05	DRG	Yes	HEL	01/24/05	YES	AJP	3/5/2005
T-16_C11	421354.3561	3863390.643	72	20		2	T-16_7	11/20/04			0	0		CD	.25	3 x .25 x .25	survey nail, Rusted	0	0	NA	90	0	1.5	T165_C11 - #003	1/18/06	barn	NA	DRA	02/22/06	YES	RVW	
T-16_C14	421361.6705	3863397.04	96	41		2		11/20/04			0	0		NC			checked with em-61								1/18/06	barn	YES	TF	01/18/06	NA	DRA	02/22/06
T-16_C6	421350.6982	3863384.551	60	0		4	T-16_2	11/20/04			0	0		CD	.25	2 x .5 x .5	piece of steel, Rusted	0	0	NA	0	.5	.5	T16_C6 - #004	1/18/06	barn	NA	DRA	02/22/06	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)

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)

Scale 1:180

2.5 0 2.5 5 7.5 10

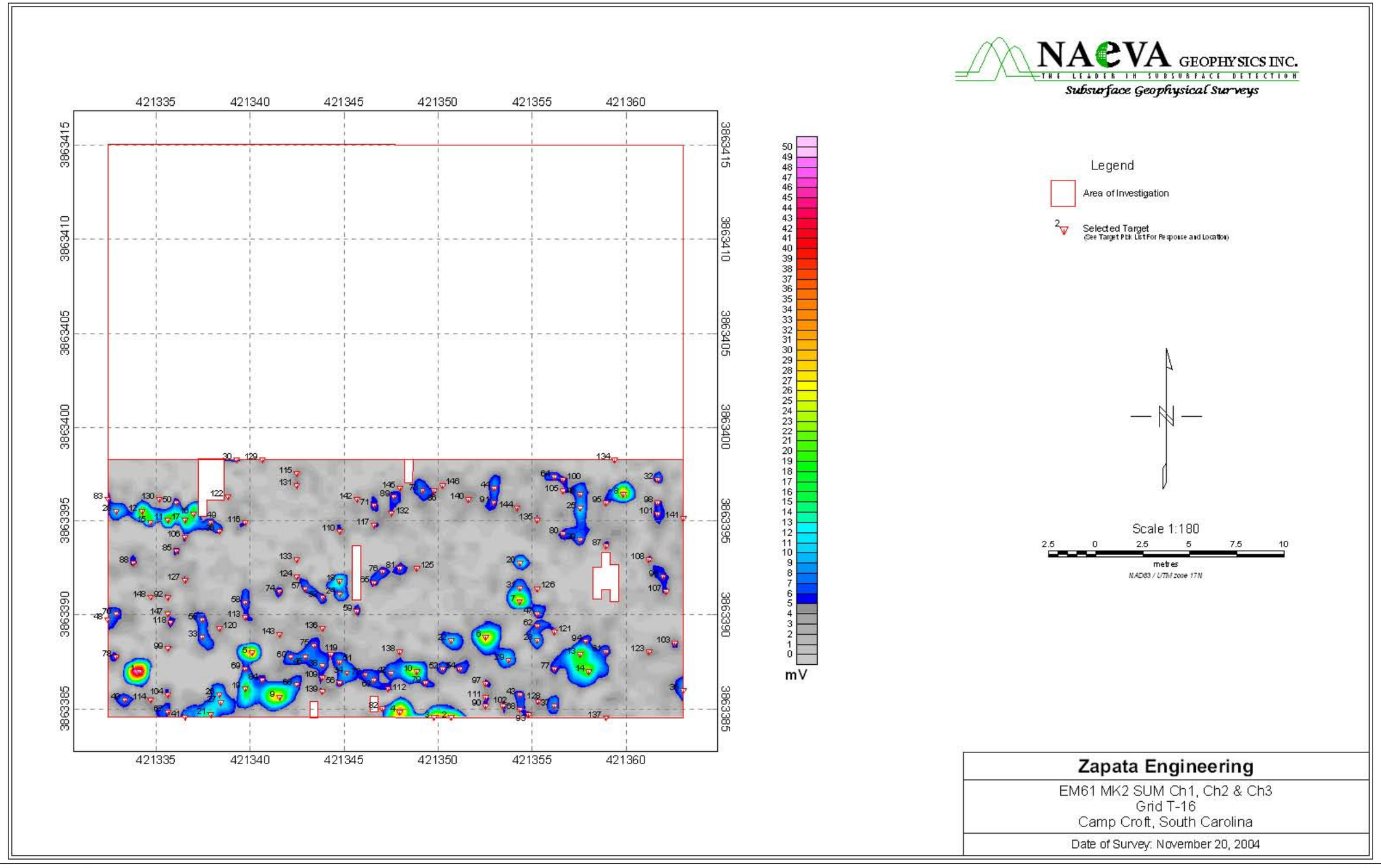
metres

NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid T-16
Camp Croft, South Carolina

Date of Survey: November 20, 2004, 2004


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys
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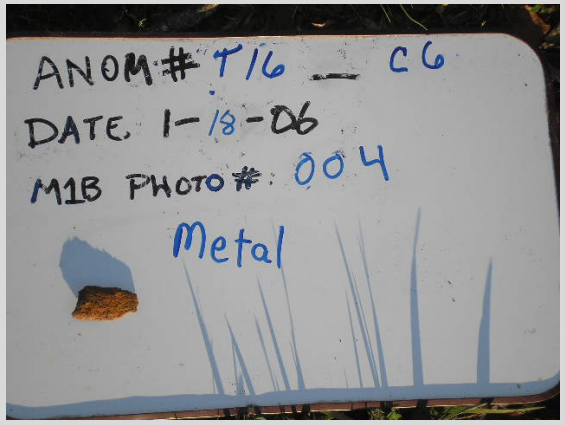
mV
Legend
Area of Investigation
Selected Target
(See Target Pick List For Response and Location)
Scale 1:180
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N
Zapata Engineering
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid T-16
Camp Croft, South Carolina
Date of Survey: November 20, 2004

GRID T16 DIG PHOTOS



ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

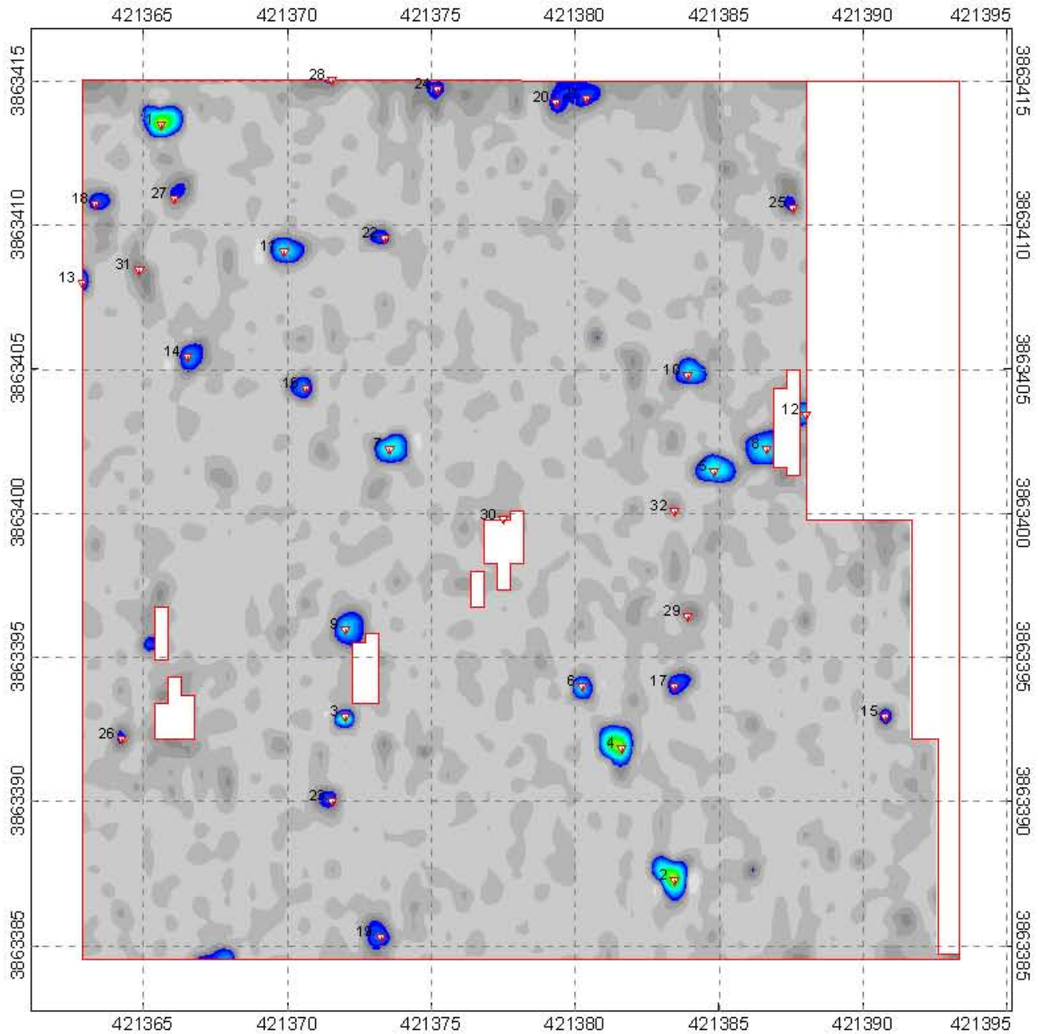
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: T17
Field Book ID:

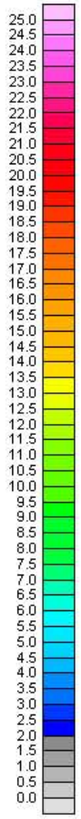
Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: Brendan Slater
COE Project Engineer:
COE Geophysicist: Andrew Schwartz

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)	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)	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
T-17_13	421383.4527	3863387.285	67.5	9	26.0		T-17_C2	11/23/04	26		0	0	01/11/05	CD	0.25	3 x 3	Crushed aluminum can					0	0		01/17/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
T-17_2	421373.2345	3863385.251	33.964	2.3187	42.0		T-17_C19	11/23/04	54		0	0	01/11/05	MD	4.5	6 x 2.5	M69 training mortar 60mm			S	30	1	14		01/17/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
T-17_3	421386.4628	3863402.257	77.3792	58.1226	36.0		T-17_C8	11/23/04	31		18	6	01/11/05	CD	0.5	6 x 0.375	Old nail	9.9009901	9.9009901			0.5	0.05		01/17/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
T-17_54	421384.0621	3863396.429	69.5	39	9.0		T-17_C29	11/23/04	16		-12	-12	01/11/05	CD	0.5	3 x 1 x 1.5	Metal part	-8.486563	-8.486563			0.5	0.75		01/17/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
T-17_69	421384.0336	3863404.945	69.4067	66.9401	9.0		T-17_C10	11/23/04	24		-12	-6	01/11/05	CD	0.25	5 x 3	Crushed aluminum can					0	0		01/17/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
T-17_74	421379.3393	3863384.848	54	1	5.0			11/23/04	8		18	-6	01/11/05	GEO	1.5	4 x 4	Geo rock/soil	0	-9			12	14		01/17/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
T-17_9	421381.6245	3863391.857	61.5	24	32.0		T-17_C4	11/23/04	54		-12	0	01/11/05	CD	0.5	3.5 x 0.25	Bolt	-14.14427	14.144272			1	1		01/17/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
T-17_C15	421390.7653	3863392.922	91.5	27.5		4		11/23/04			0	0		NC			checked with em-61								1/18/06	barn	YES	TF	01/18/06	NA	DRA	02/22/06
T-17_C30	421377.5112	3863399.783	48	50		2	T-17_14	11/23/04			0	0		CD	.25	3 x .25 x .25	nail, Rusted	0	0	NA	0	0	1.5	T17_C30 - #006	1/18/06	barn	NA	DRA	02/22/06	YES	RVW	
T-17_C5	421384.8238	3863401.458	72	55.5		7	T-17_33	11/23/04			0	0		CD	.25	5 x 3 x 3	aluminum beer can, Deformed	0	0	NA	0	4	5	T17_C5 - #014	1/18/06	barn	NA	DRA	02/22/06	YES	RVW	
T-17_C6	421380.2534	3863393.991	57	31		7		11/23/04			0	0		CD	.25	4 x .25 x .25	barbed wire, Rusted	0	0	NA	0	1	1	T17_C6 - #016	1/18/06	barn	NA	DRA	02/22/06	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)





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)

Scale 1:180

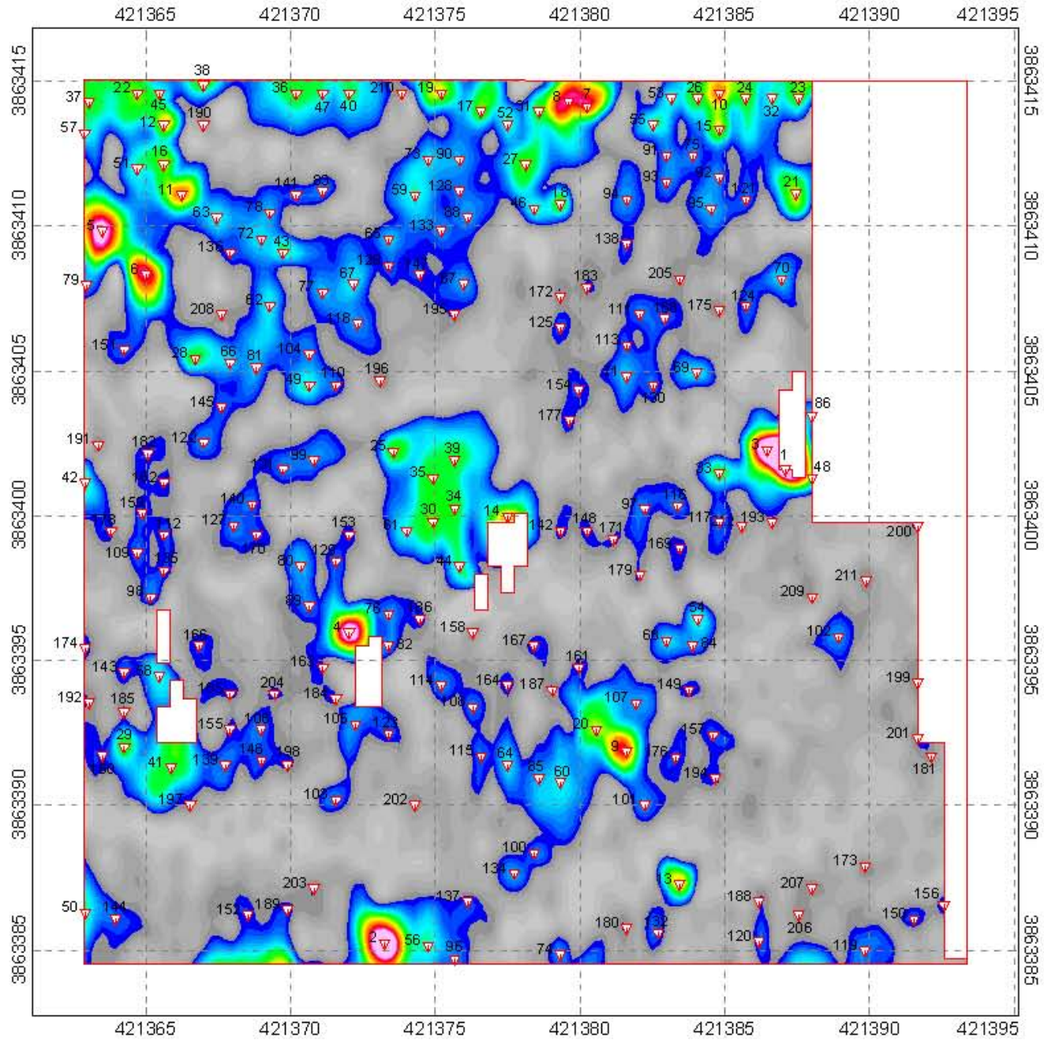
2.5 0 2.5 5 7.5 10
metres

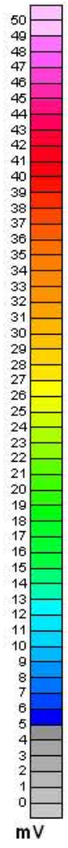
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid T-17
Camp Croft, South Carolina

Date of Survey: November 23, 2004



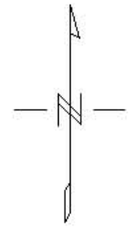


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Scale 1:180

2.5 0 2.5 5 7.5 10

metres

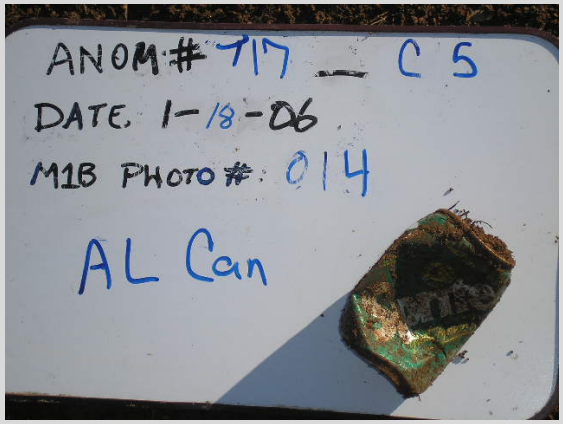
NAD83 / UTM zone 17N

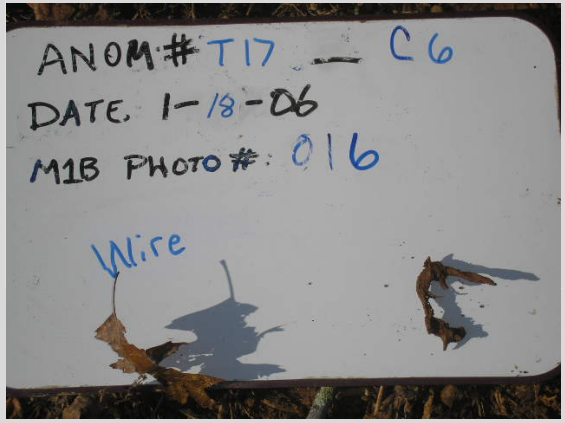
Zapata Engineering

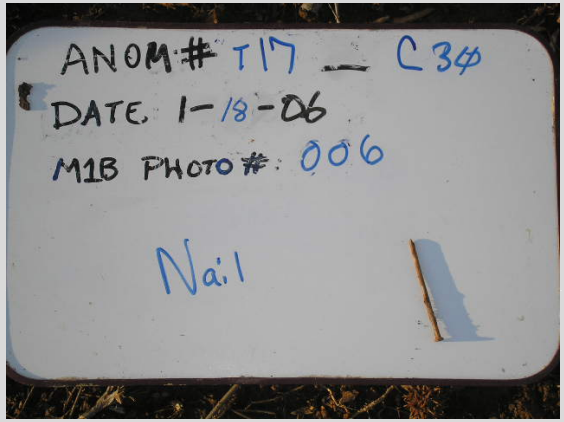
EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid T-17
Camp Croft, South Carolina

Date(s) of Survey: November 23, 2004

GRID T17 DIG PHOTOS







ZAPATA ENGINEERING
Geophysical Dig Sheet and Target History

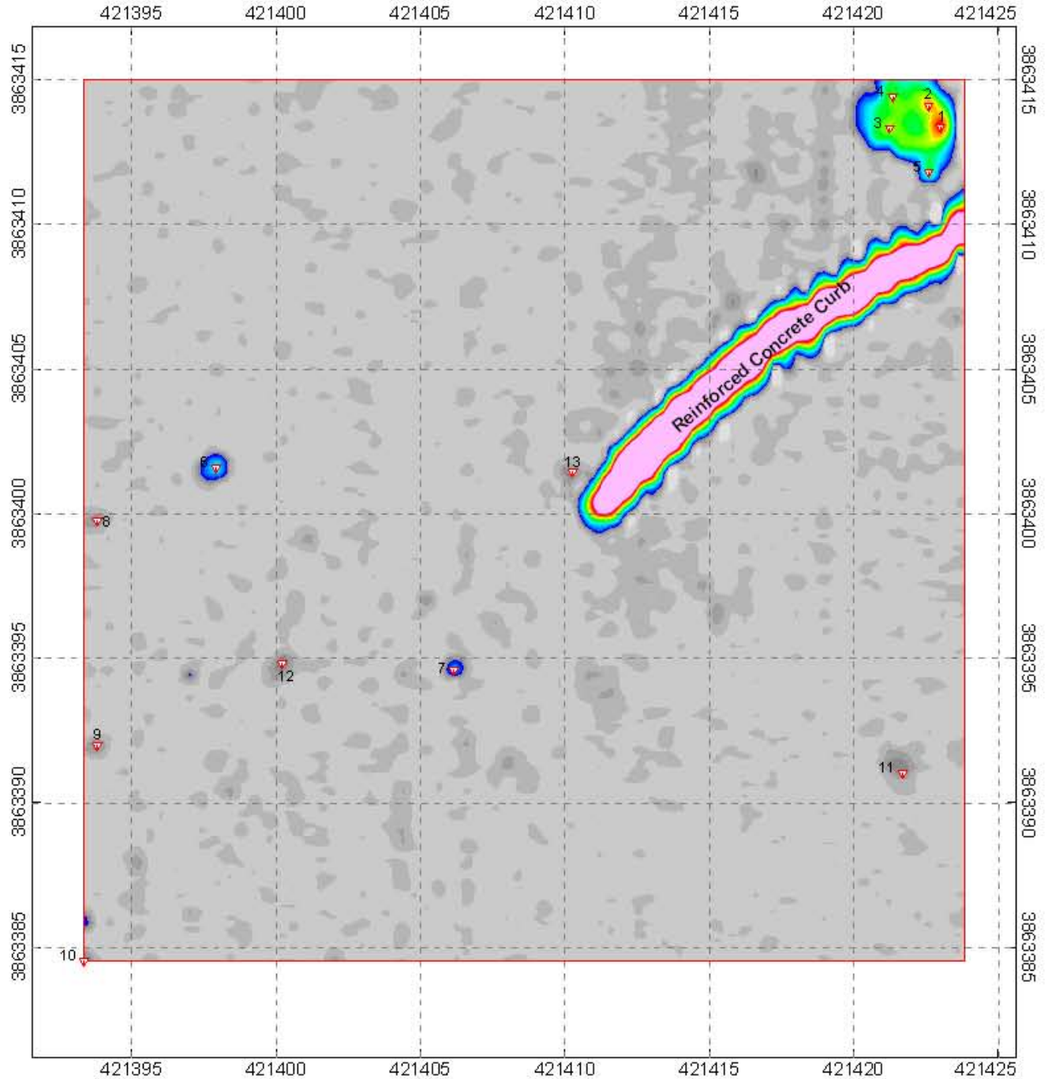
Project Name: Former Camp Croft, Phase I
Project Location: Spartanburg, South Carolina
Date: February 2006
Coordinate System: UTM NAD83 17N Meters
Survey Area ID: NA
Sector: Grid: T10
Field Book ID:

Geophysical Contractor: ZAPATAENGINEERING / NAEVA GEOPHYSICS
Project Geophysicist: David Smith
Site Geophysicist:
Field Team:
COE Design Center POC: 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)	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)	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
T-18_12	421400.225	3863394.698	22.5468	33.3357	12.0		T-18_C12	11/27/04	12		0	0	01/11/05	CD	0.5	2.25 x 2.25	End cap on PVC line	0	3			10	10.5		01/17/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
T-18_29	421397.9256	3863401.607	15	56	11.0		T-18_C6	11/27/04	18		-6	-6	01/11/05	CD	0.25	1.5 x 0.125	Old nail	12	0			6	6		01/17/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
T-18_36	421409.0468	3863390.783	51.5	20.5	6.0			11/27/04	5		0	0	01/11/05	GEO	2	6 x 6	Geo soil	-4.243281	4.2432815			0	1		01/17/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
T-18_39	421398.8765	3863394.503	10.1208	32.694	5.0			11/27/04	4		-3	0	01/11/05	GEO	2	6 x 6	Geo soil	-12	0			0	1		01/17/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
T-18_41	421405.3905	3863397.033	39.5	41	4.0			11/27/04	4		0	0	01/11/05	CD	0.25	2 x 0.125	Nail (old)	0	6			0.5	1		01/17/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
T-18_43	421405.869	3863394.946	41.0704	34.154	5.0		T-18_C7	11/27/04	5		0	12	01/11/05	NC			No contact								01/17/05	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005

* 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)

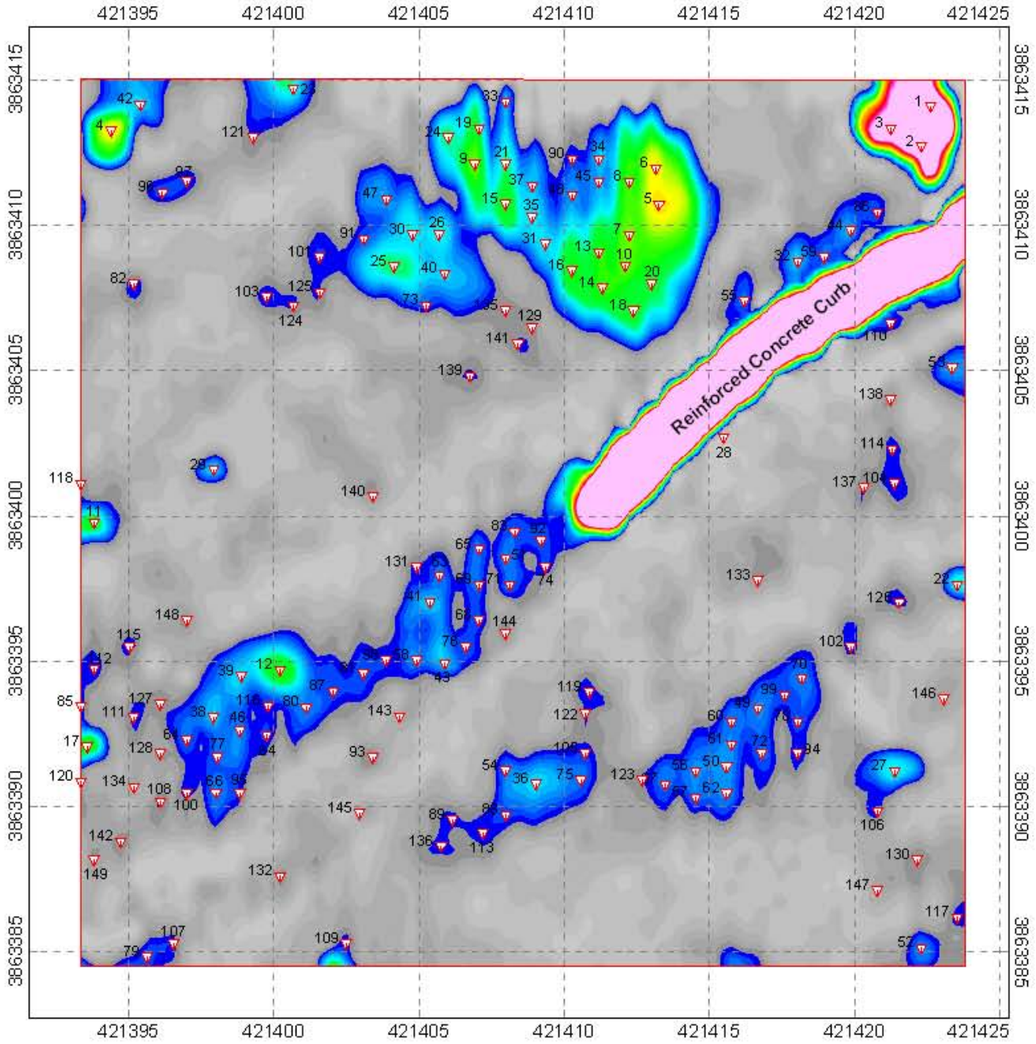
Scale 1:180

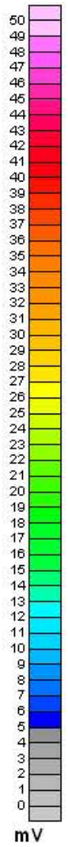
2.5 0 2.5 5 7.5 10
metres
NAD83 / UTM zone 17N

Zapata Engineering

EM61 MK2 Chi2
Grid T-18
Camp Croft, South Carolina

Date of Survey: November 27, 2004



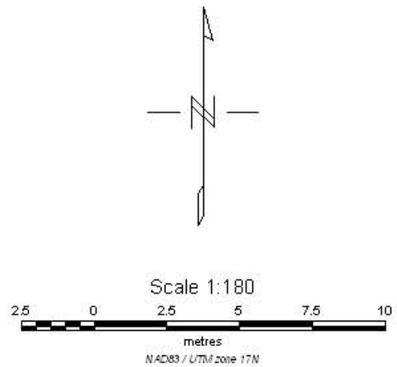


NAEVA GEOPHYSICS INC.
THE LEADER IN SUBSURFACE DETECTION
Subsurface Geophysical Surveys

Legend

Area of Investigation

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



Zapata Engineering

EM61 MK2 SUM Ch1, Ch2 & Ch3
Grid T-18
Camp Croft, South Carolina

Date(s) of Survey: November 27, 2004

APPENDIX E
SCRAP MANAGEMENT FORMS

ZAPATAENGINEERING
TRUST • INTEGRITY • QUALITY

February 4, 2005

Arrow Steel Products, Inc.
1621 Union St.
Spartanburg, SC 29302

Subject: Final Disposition of Ordnance Related Scrap from the Former Camp Croft, Spartanburg, SC

Dear Mr. Tanenbaum,

ZAPATAENGINEERING is, at no additional cost to the Government, delivering to your company ordnance related scrap that was recovered at the Former Camp Croft in Spartanburg, SC. Your signature below indicates that you have received six unopened and labeled containers each with its own unique identified and unbroken seal to ensure a continued chain of custody. You further agree with the provided documentation that the sealed containers contain no explosive hazard when received and that the contents of these sealed containers will not be sold, traded or otherwise be given to another party until the contents have been smelted and are only identifiable by their basic content.

We request that you will send ZAPATAENGINEERING notification, via the letter provided in Encl. 1, and supporting documentation that the scrap inside the sealed containers have been smelted and are only identifiable by their basic content.

Your assistance is greatly appreciated.

Douglas D. McCue
SUXOS

Enclosure (1): Letter of notification.

Acknowledgement: _____
Rick Tanenbaum

6320 Fairview Rd. • Suite 600 • Charlotte, NC 28210 • Tel 704 358 8240 • Fax 704 358 8342
www.zapeng.com

ZAPATAENGINEERING, PA
ATTN: Jeff Schwalm
1100 Kenilworth Ave.
Charlotte, NC 28204

Subject: Final Disposition of Ordnance Related Scrap from Former Camp Croft, Spartanburg, SC

Dear Mr. Schwalm,

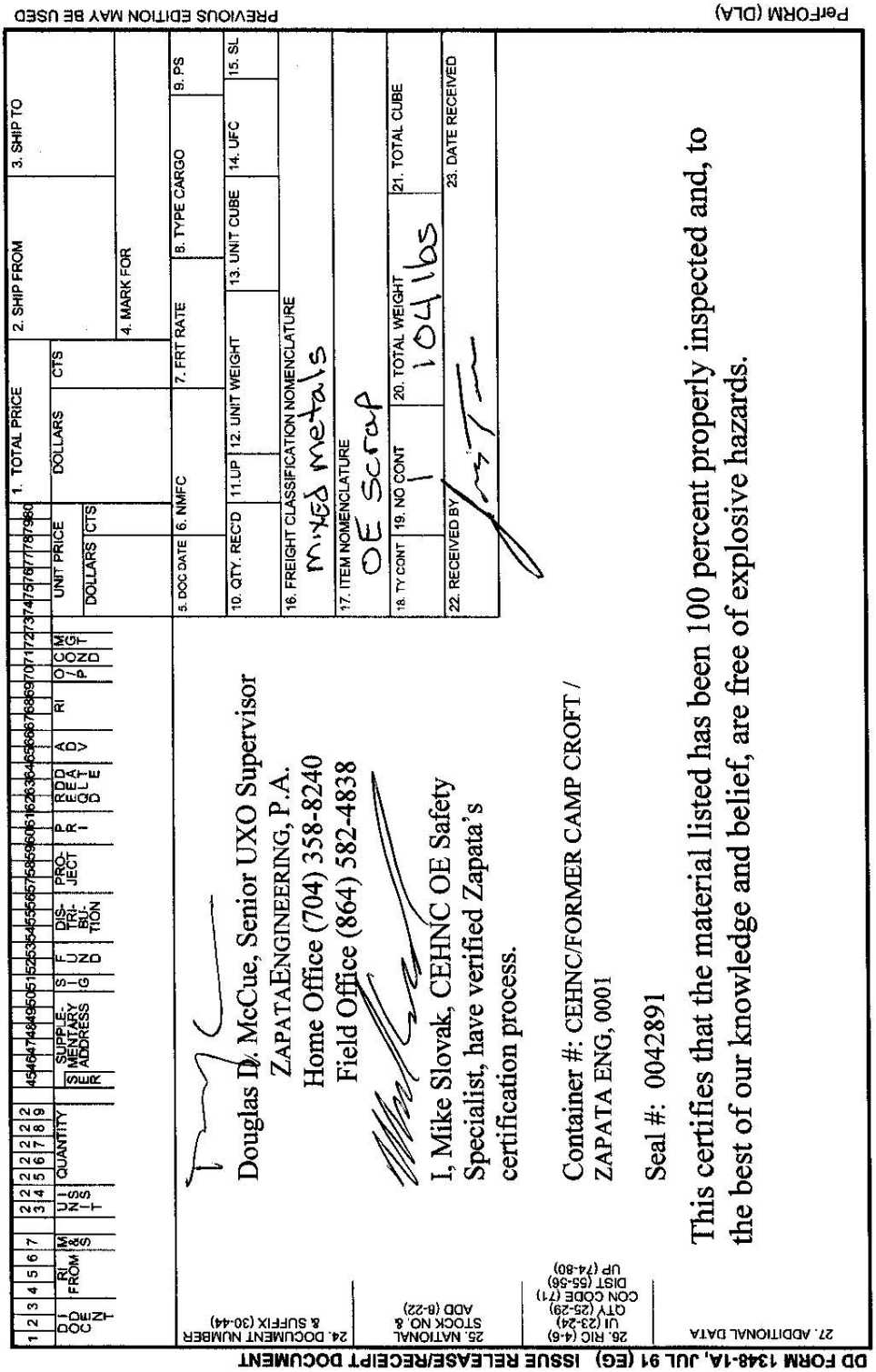
Arrow Steel Products, Inc. received six 33 gallon barrels of ordnance related scrap from ZAPATAENGINEERING on February 4, 2005. Each container was sealed, unopened and had its own identification documentation attached. The total weight of all ordnance related scrap was 622 lbs.

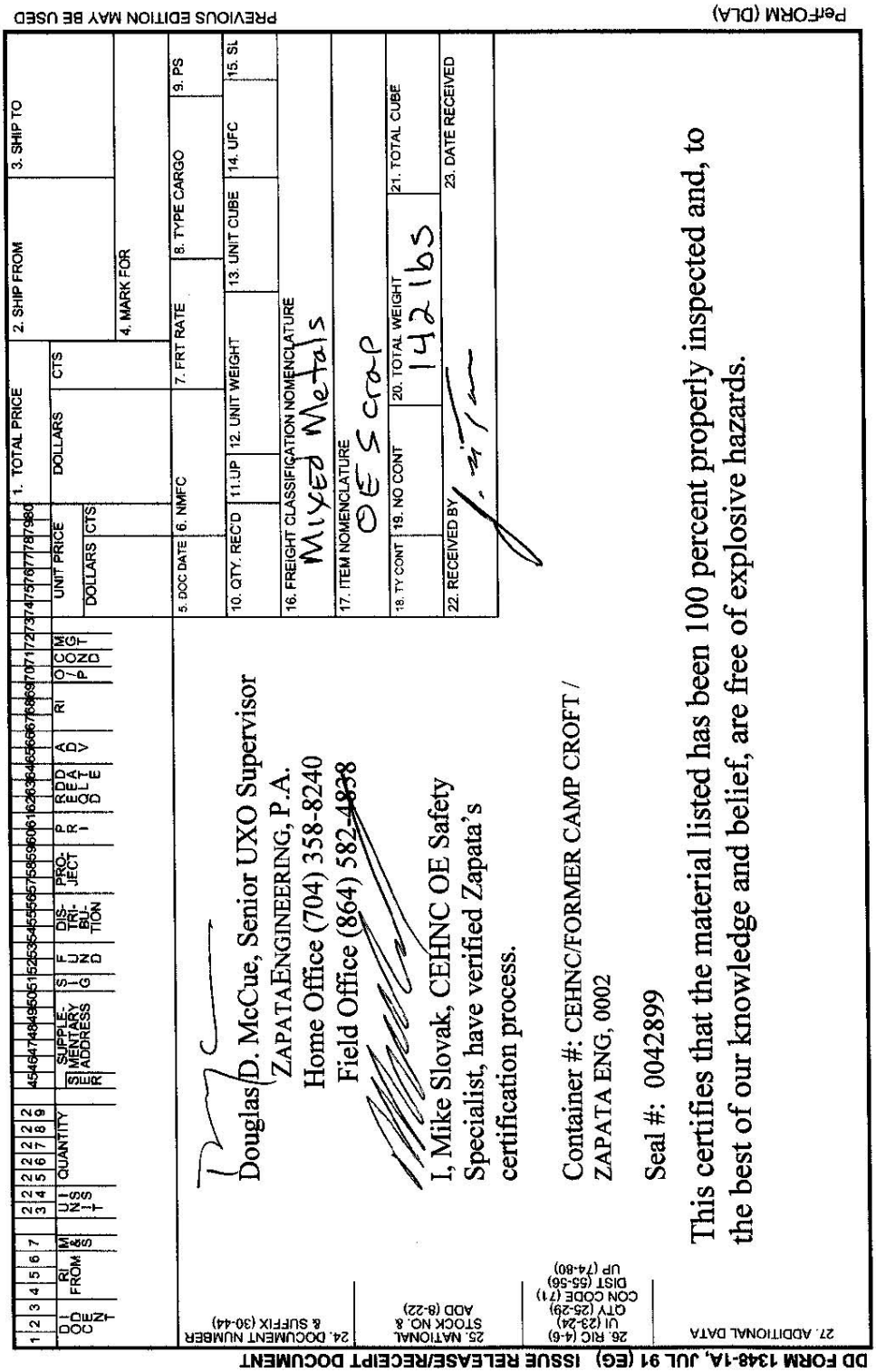
The scrap was sent to Nucor Steel on 2/22/05 for smelting and was smelted on this date: 2/24/05. This scrap is now only identifiable by its basic content.

Sincerely,

Mr. Rick Tanenbaum

Encl. 1


PREVIOUS EDITION MAY BE USED
PerFORM (DLA)
DD FORM 1348-1A, JUL 91 (EG) ISSUE RELEASE/RECEIPT DOCUMENT
1. TOTAL PRICE
2. SHIP FROM
3. SHIP TO
4. MARK FOR
UNIT PRICE
DOLLARS
CTS
QUANTITY
SUPPLEMENTARY ADDRESS
5. DOC DATE
6. NMFC
7. FRT RATE
8. TYPE CARGO
9. PS
10. QTY. REC'D
11.UP
12. UNIT WEIGHT
13. UNIT CUBE
14. UFC
15. SL
16. FREIGHT CLASSIFICATION NOMENCLATURE
Mixed metals
17. ITEM NOMENCLATURE
OE Scrap
18. TY CONT
19. NO CONT
1
20. TOTAL WEIGHT
10416 lbs
21. TOTAL CUBE
22. RECEIVED BY
23. DATE RECEIVED
24. DOCUMENT NUMBER & SUFFIX (30-44)
25. NATIONAL STOCK NO. & ADD (8-22)
26. RIC (4-6) UI (23-24) QTY (25-29) CON CODE (71) DIST (55-56) UP (74-80)
27. ADDITIONAL DATA
Douglas D. McCue, Senior UXO Supervisor
ZAPATAENGINEERING, P.A.
Home Office (704) 358-8240
Field Office (864) 582-4838
I, Mike Slovak, CEHNC OE Safety Specialist, have verified Zapata's certification process.
Container #: CEHNC/FORMER CAMP CROFT / ZAPATA ENG, 0001
Seal #: 0042891
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.


PREVIOUS EDITION MAY BE USED
PerFORM (DLA)
DD FORM 1348-1A, JUL 91 (EG) ISSUE RELEASE/RECEIPT DOCUMENT
1. TOTAL PRICE
2. SHIP FROM
3. SHIP TO
4. MARK FOR
DOLLARS
CTS
UNIT PRICE
DOLLARS
CTS
5. DOC DATE
6. NMFC
7. FRT RATE
8. TYPE CARGO
9. PS
10. QTY. REC'D
11.UP
12. UNIT WEIGHT
13. UNIT CUBE
14. UFC
15. SL
16. FREIGHT CLASSIFICATION NOMENCLATURE
Mixed Metals
17. ITEM NOMENCLATURE
OE Scrap
18. TY CONT
19. NO CONT
20. TOTAL WEIGHT
14216 lbs
21. TOTAL CUBE
22. RECEIVED BY
23. DATE RECEIVED
24. DOCUMENT NUMBER & SUFFIX (30-44)
25. NATIONAL STOCK NO. & ADD (8-22)
26. RIC (4-6) UI (23-24) QTY (25-29) DIST (55-56) CON CODE (71) UP (74-80)
27. ADDITIONAL DATA
Douglas D. McCue, Senior UXO Supervisor
ZAPATAENGINEERING, P.A.
Home Office (704) 358-8240
Field Office (864) 582-4838
I, Mike Slovak, CEHNC OE Safety Specialist, have verified Zapata's certification process.
Container #: CEHNC/FORMER CAMP CROFT / ZAPATA ENG, 0002
Seal #: 0042899
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.

PerFORM (DLA)

PREVIOUS EDITION MAY BE USED

DD FORM 1348-1A, JUL 91 (EG) ISSUE RELEASE/RECEIPT DOCUMENT

1 2 3 4 5 6 7	DI OD CE N T / RI FROM / M & S / UI N S I T	2 2 3 4	2 2 5 6	2 2 7 8	2 2 9 9	QUANTITY	4 5 4 6 4 7 4 8 4 9 5 0 5 1	SUPPLE-MENTARY ADDRESS	SER	5 2 5 3 5 4 5 5 5 6 5 7	S I G N	F U N D	5 8 5 9 6 0 6 1 6 2	DIS-TRI-BU-TION	6 3 6 4 6 5 6 6 6 7 6 8	PRO-JECT	6 9 7 0 7 1 7 2 7 3	P R I	7 4 7 5 7 6 7 7 7 8 7 9 8 0	RDD	8 1 8 2 8 3 8 4 8 5	AADV	8 6 8 7	RI	8 8 8 9 9 0	OPND	9 1 9 2 9 3	CMGT	9 4 9 5 9 6 9 7 9 8 9 9 1 0 0	UNIT PRICE	DOLLARS	CTS	1. TOTAL PRICE	DOLLARS	CTS	2. SHIP FROM	3. SHIP TO

4. MARK FOR

24. DOCUMENT NUMBER & SUFFIX (30-44)	5. DOC DATE	6. NMFC	7. FRT RATE	8. TYPE CARGO	9. PS
	10. QTY. REC'D	11. UP	12. UNIT WEIGHT	13. UNIT CUBE	14. UFC	15. SL
	16. FREIGHT CLASSIFICATION NOMENCLATURE: Mixed Metals				
	17. ITEM NOMENCLATURE: OE Scrap				
25. NATIONAL STOCK NO. & ADD (8-22)	18. TY CONT	19. NO CONT	20. TOTAL WEIGHT: 11 6 lbs	21. TOTAL CUBE	
	22. RECEIVED BY			23. DATE RECEIVED	

26. RIC (4-6) UI (23-24) QTY (25-29) CON CODE (71) DIST (55-56) UP (74-80)

27. ADDITIONAL DATA

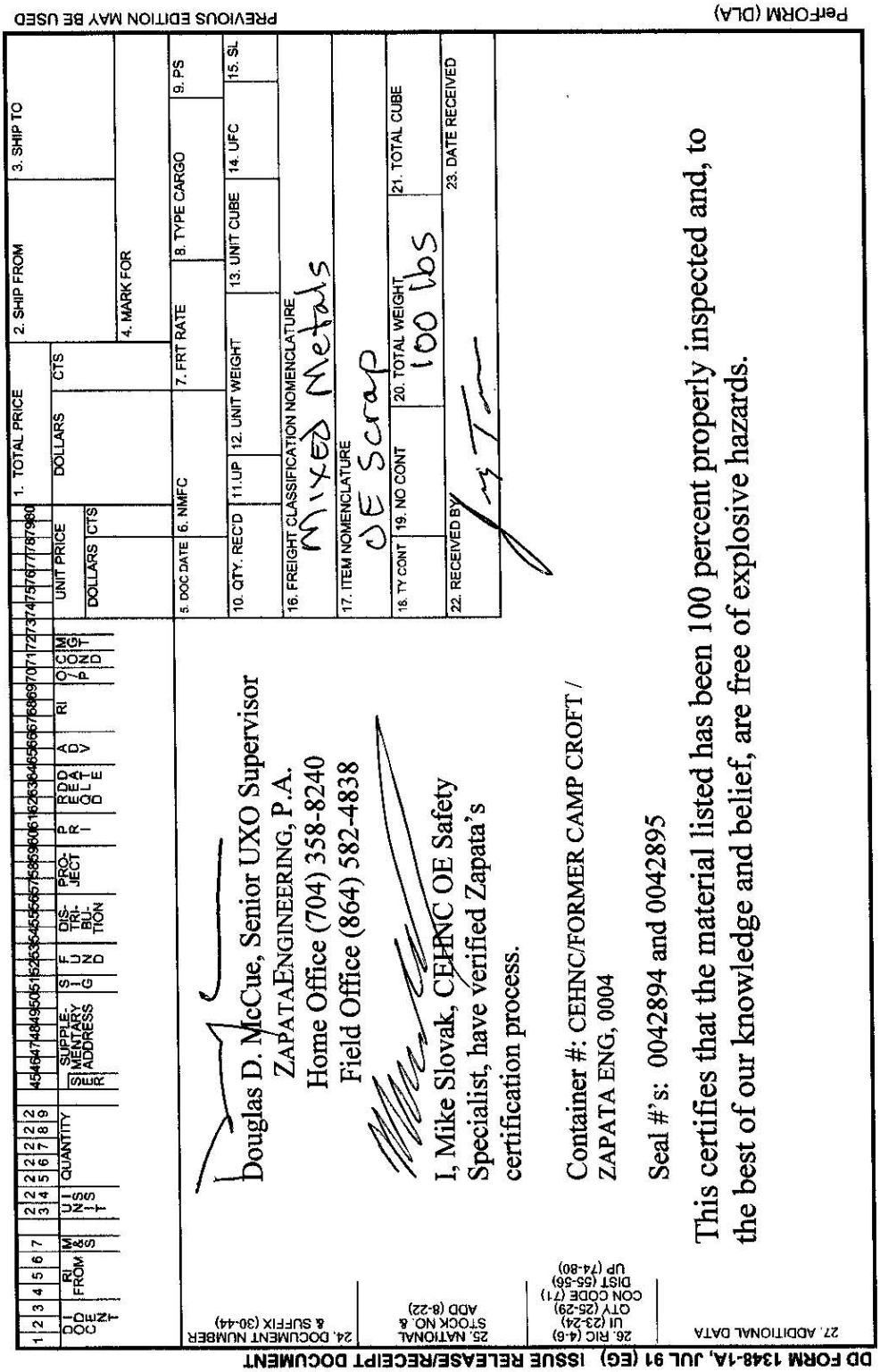
I, Douglas D. McCue, Senior UXO Supervisor
ZAPATAENGINEERING, P.A.
Home Office (704) 358-8240
Field Office (864) 582-4838

I, Mike Slovak, CEHNC OE Safety Specialist, have verified Zapata's certification process.

Container #: CEHNC/FORMER CAMP CROFT / ZAPATA ENG, 0003

Seal #: 0042893

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.


DD FORM 1348-1A, JUL 91 (EG) ISSUE RELEASE/RECEIPT DOCUMENT
PREVIOUS EDITION MAY BE USED
PerFORM (DLA)
1. TOTAL PRICE
2. SHIP FROM
3. SHIP TO
4. MARK FOR
5. DOC DATE
6. NMFC
7. FRT RATE
8. TYPE CARGO
9. PS
10. QTY. REC'D
11. UP
12. UNIT WEIGHT
13. UNIT CUBE
14. UFC
15. SL
16. FREIGHT CLASSIFICATION NOMENCLATURE
Mixed Metals
17. ITEM NOMENCLATURE
OE Scrap
18. TY CONT
19. NO CONT
20. TOTAL WEIGHT
100 lbs
21. TOTAL CUBE
22. RECEIVED BY
23. DATE RECEIVED
24. DOCUMENT NUMBER & SUFFIX (30-44)
25. NATIONAL STOCK NO. & ADD (8-22)
26. RIC (4-6) UI (23-24) QTY (25-29) CON CODE (71) DIST (55-56) UP (74-80)
27. ADDITIONAL DATA
Douglas D. McCue, Senior UXO Supervisor
ZAPATAENGINEERING, P.A.
Home Office (704) 358-8240
Field Office (864) 582-4838
I, Mike Slovak, CEHNC OE Safety Specialist, have verified Zapata's certification process.
Container #: CEHNC/FORMER CAMP CROFT / ZAPATA ENG, 0004
Seal #'s: 0042894 and 0042895
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.

PerFORM (DLA) PREVIOUS EDITION MAY BE USED

DD FORM 1348-1A, JUL 91 (EG) ISSUE RELEASE/RECEIPT DOCUMENT

1. TOTAL PRICE | 2. SHIP FROM | 3. SHIP TO

4. MARK FOR

5. DOC DATE | 6. NMFC | 7. FRT RATE | 8. TYPE CARGO | 9. PS

10. QTY. REC'D | 11. UP | 12. UNIT WEIGHT | 13. UNIT CUBE | 14. UFC | 15. SL

16. FREIGHT CLASSIFICATION NOMENCLATURE
Mixed Metals

17. ITEM NOMENCLATURE
OE Scrap

18. TY CONT | 19. NO CONT | 20. TOTAL WEIGHT 4881 lbs | 21. TOTAL CUBE

22. RECEIVED BY | 23. DATE RECEIVED

Douglas D. McCue, Senior UXO Supervisor
ZAPATAENGINEERING, P.A.
Home Office (704) 358-8240
Field Office (864) 582-4838

I, Mike Slovak, CEHNC OE Safety Specialist, have verified Zapata's certification process.

Container #: CEHNC/FORMER CAMP CROFT / ZAPATA ENG, 0005

Seal #'s: 0042896 and 0042897

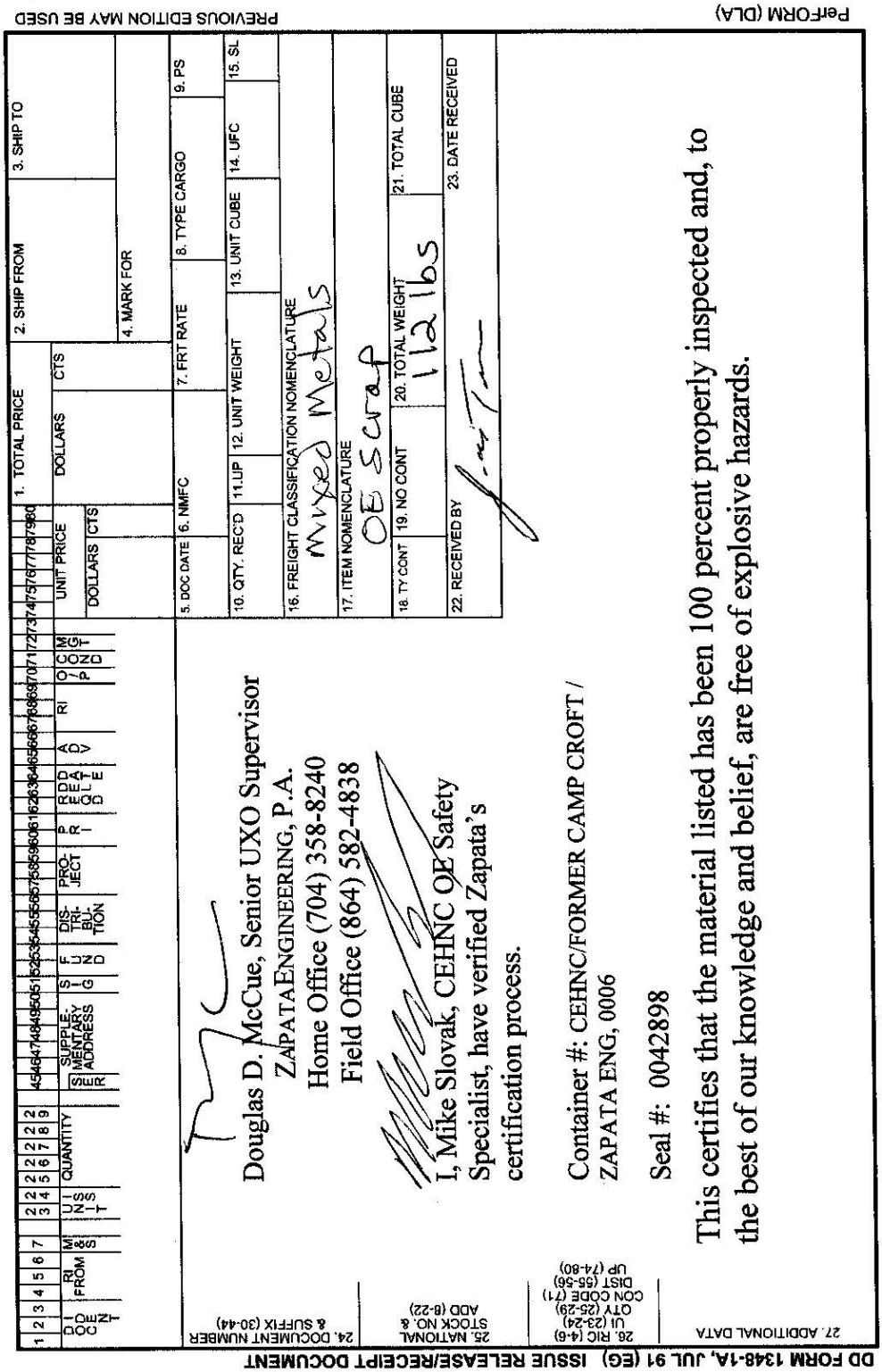
This certifies that the material listed has been 100 percent properly inspected and, to the best of our knowledge and belief, are free of explosive hazards.

24. DOCUMENT NUMBER & SUFFIX (30-44)

25. NATIONAL STOCK NO. & ADD (8-22)

26. RIC (4-6) UI (23-24) QTY (25-29) CON CODE (71) DIST (55-56) UP (74-80)

27. ADDITIONAL DATA


DD FORM 1348-1A, JUL 91 (EG) ISSUE RELEASE/RECEIPT DOCUMENT
PerFORM (DLA)
PREVIOUS EDITION MAY BE USED
1. TOTAL PRICE
2. SHIP FROM
3. SHIP TO
4. MARK FOR
5. DOC DATE
6. NMFC
7. FRT RATE
8. TYPE CARGO
9. PS
10. QTY. REC'D
11. UP
12. UNIT WEIGHT
13. UNIT CUBE
14. UFC
15. SL
16. FREIGHT CLASSIFICATION NOMENCLATURE
Mixed Metals
17. ITEM NOMENCLATURE
OE Scrap
18. TY CONT
19. NO CONT
20. TOTAL WEIGHT
112 lbs
21. TOTAL CUBE
22. RECEIVED BY
23. DATE RECEIVED
24. DOCUMENT NUMBER & SUFFIX (30-44)
25. NATIONAL STOCK NO. & ADD (8-22)
26. RIC (4-6) UI (23-24) QTY (25-29) CON CODE (71) DIST (55-56) UP (74-80)
27. ADDITIONAL DATA
Douglas D. McCue, Senior UXO Supervisor
ZAPATAENGINEERING, P.A.
Home Office (704) 358-8240
Field Office (864) 582-4838
I, Mike Slovak, CEHNC OE Safety Specialist, have verified Zapata's certification process.
Container #: CEHNC/FORMER CAMP CROFT / ZAPATA ENG, 0006
Seal #: 0042898
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.

APPENDIX F
QUALITY CONTROL/QUALITY ASSURANCE DOCUMENTATION

APPENDIX F1
QC INSPECTION FORMS

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: M22	Date: January 2005
Start: 17 January 2005	**Completion:** 17 January 2005	Page 1 of __1__ Pages

Personnel: Schwalm, Moral, Childers

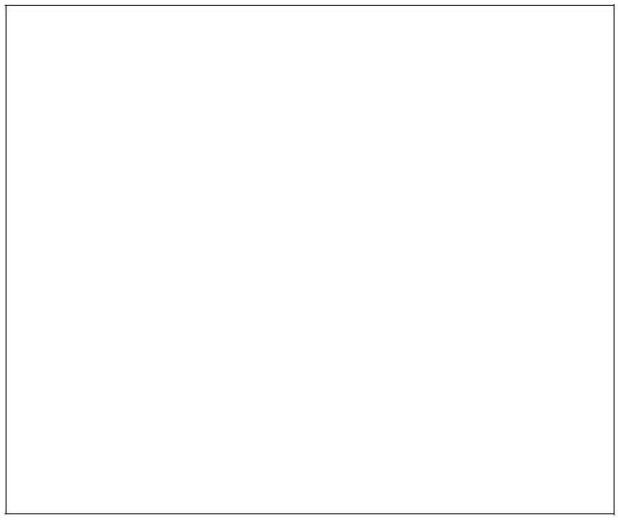
UXO Supervisor: Gipson

Remarks: Inspected anomaly numbers

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	
Passed Inspection: Yes			

Draw the approximate location(s) of above items where answered Yes



Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: N11	Date: 19 January 2005
Start: 17 January 2005	**Completion:** 17 January 2005	Page 1 of __1__ Pages

Personnel: Kendall, Vroman, Smith, Fox

UXO Supervisor: Funk

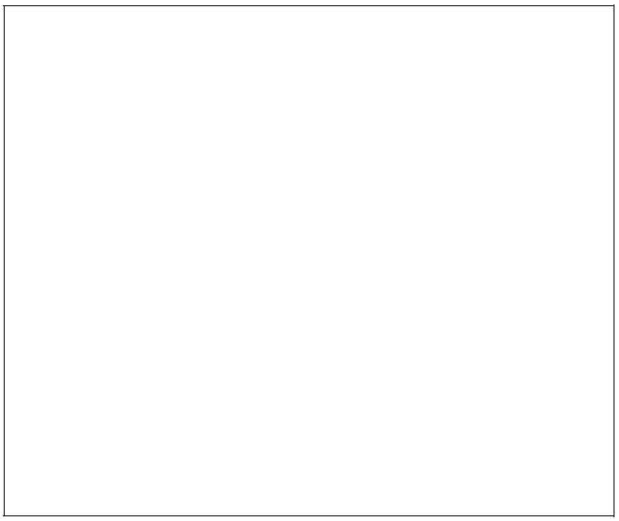
Remarks: Inspected anomaly numbers 1, 8 and 14. (100%)

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	

Passed Inspection: Yes

Draw the approximate location(s) of above items where answered Yes



Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: N11	Date: 19 January 2005
Start: 17 January 2005	**Completion:** 17 January 2005	Page 1 of __1__ Pages

Personnel: Kendall, Vroman, Smith, Fox

UXO Supervisor: Funk

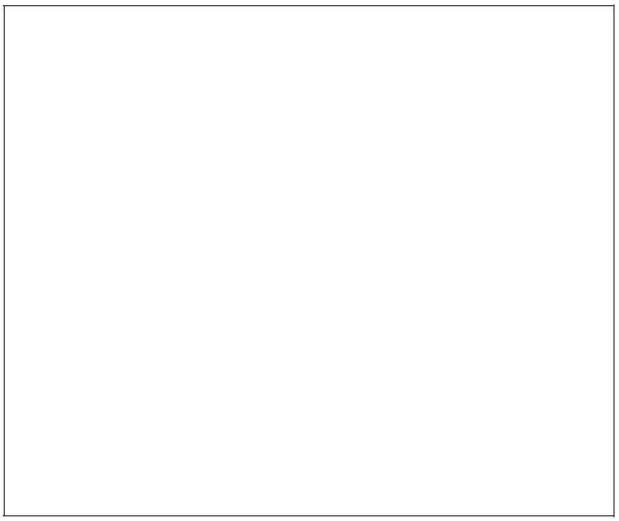
Remarks: Inspected anomaly numbers 1, 8 and 14. (100%)

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	

Passed Inspection: Yes

Draw the approximate location(s) of above items where answered Yes



Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: N21	Date: January 2005
Start: 11 January 2005	**Completion:** 11 January 2005	Page 1 of __1__ Pages

Personnel: Schwalm, Moral, Childers

UXO Supervisor: Gipson

Remarks: Inspected anomaly numbers

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	

Passed Inspection: Yes

Draw the approximate location(s) of above items where answered Yes

Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: N22	Date: January 2005
Start: 11 January 2005	**Completion:** 11 January 2005	Page 1 of __1__ Pages

Personnel: Schwalm, Moral, Childers

UXO Supervisor: Gipson

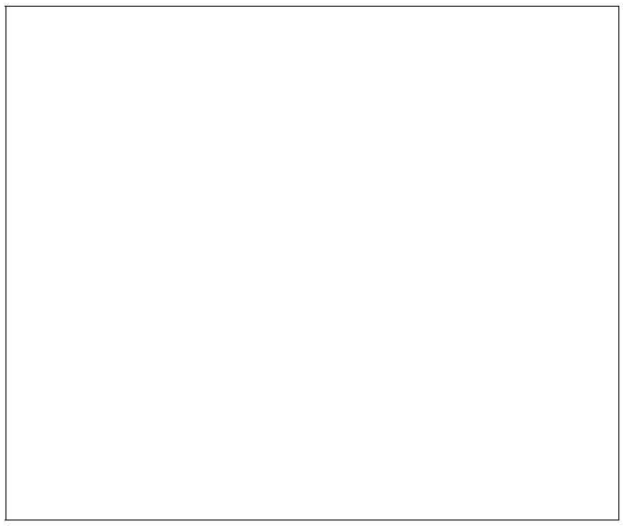
Remarks: Inspected anomaly numbers

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	

Passed Inspection: Yes

Draw the approximate location(s) of above items where answered Yes



Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: P11	Date: 19 January 2005
Start: 18 January 2005	**Completion:** 18 January 2005	Page 1 of __1__ Pages

Personnel: Kendall, Vroman, Smith, Fox

UXO Supervisor: Funk

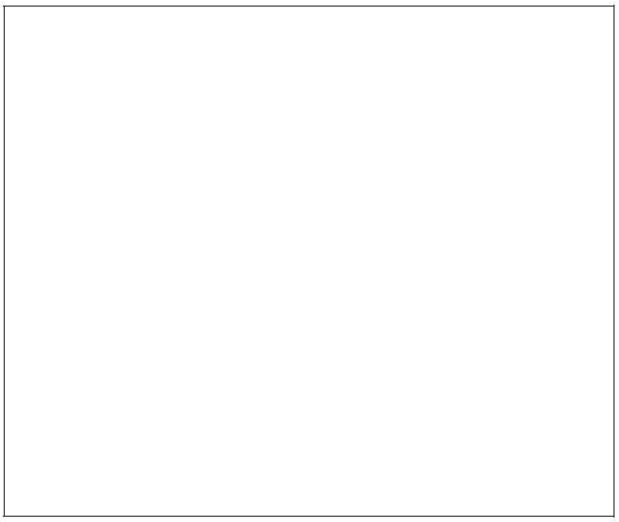
Remarks: Inspected anomaly numbers 3, 12, 14 and 25. (100%)

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	

Passed Inspection: Yes

Draw the approximate location(s) of above items where answered Yes



Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: P21	Date: January 2005
Start: 12 January 2005	**Completion:** 12 January 2005	Page 1 of __1__ Pages

Personnel: Schwalm, Moral, Childers

UXO Supervisor: Gipson

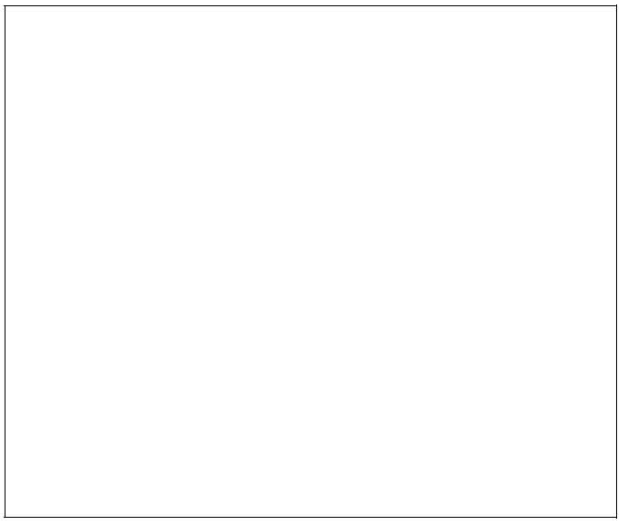
Remarks: Inspected anomaly numbers

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	

Passed Inspection: Yes

Draw the approximate location(s) of above items where answered Yes



Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: P22	Date: January 2005
Start: 11 January 2005	**Completion:** 11 January 2005	Page 1 of __1__ Pages

Personnel: Schwalm, Moral, Childers

UXO Supervisor: Gipson

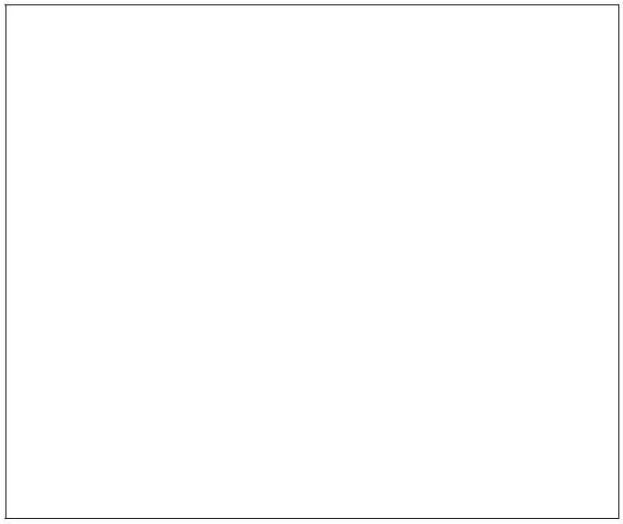
Remarks: Inspected anomaly numbers

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	

Passed Inspection: Yes

Draw the approximate location(s) of above items where answered Yes



Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: R11	Date: 19 January 2005
Start: 13 January 2005	**Completion:** 13 January 2005	Page 1 of __1__ Pages

Personnel: Kendall, Vroman, Smith, Fox

UXO Supervisor: Funk

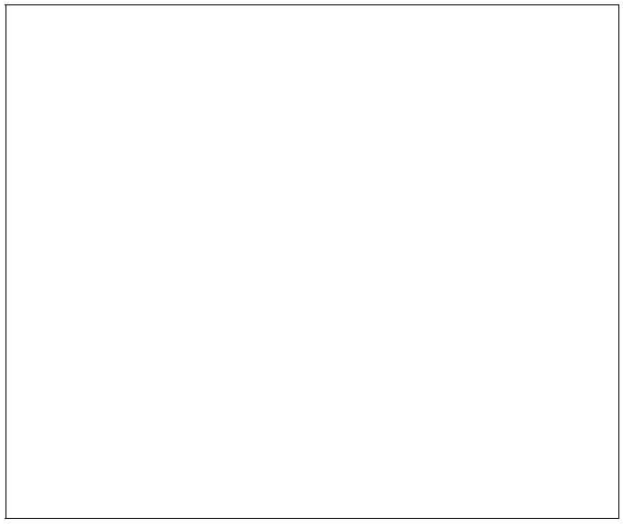
Remarks: Inspected anomaly numbers 1, 8, 11, 25 and 41. (50%)

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	

Passed Inspection: Yes

Draw the approximate location(s) of above items where answered Yes



Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: R12	Date: 19 January 2005
Start: 13 January 2005	**Completion:** 13 January 2005	Page 1 of __1__ Pages

Personnel: Kendall, Vroman, Smith, Fox

UXO Supervisor: Funk

Remarks: Inspected anomaly numbers 10, 11, 12, 13, 16, 20, 22, 28, 40 and 55. (40%)

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	

Passed Inspection: Yes

Draw the approximate location(s) of above items where answered Yes

Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: R13	Date: 19 January 2005
Start: 17 January 2005	**Completion:** 17 January 2005	Page 1 of __1__ Pages

Personnel: Kendall, Vroman, Smith, Fox

UXO Supervisor: Funk

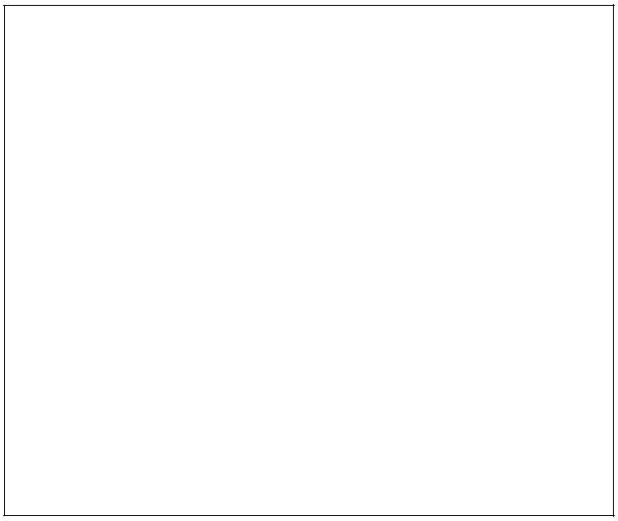
Remarks: Inspected anomaly numbers 2, 4, 13, 18, 19, 21, 42, 51, 67, 68, 79, 80, 94, 98, 100, 103, 118, 152, 178 and 202. (40%)

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	

Passed Inspection: Yes

Draw the approximate location(s) of above items where answered Yes



Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: R13	Date: January 2005
Start: 17 January 2005	**Completion:** 17 January 2005	Page 1 of __1__ Pages

Personnel: Kendall, Vroman, Smith, Fox

UXO Supervisor: Funk

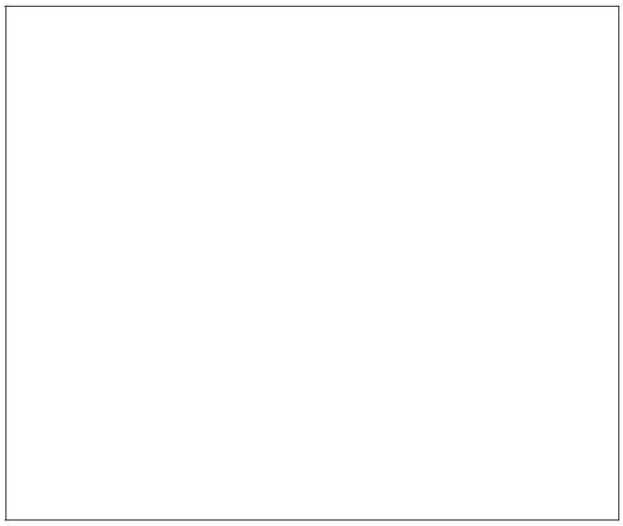
Remarks: Inspected anomaly numbers

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	

Passed Inspection: Yes

Draw the approximate location(s) of above items where answered Yes



Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: R14	Date: January 2005
Start: 17 January 2005	**Completion:** 19 January 2005	Page 1 of __1__ Pages

Personnel: Kendall, Vroman, Smith, Fox

UXO Supervisor: Funk

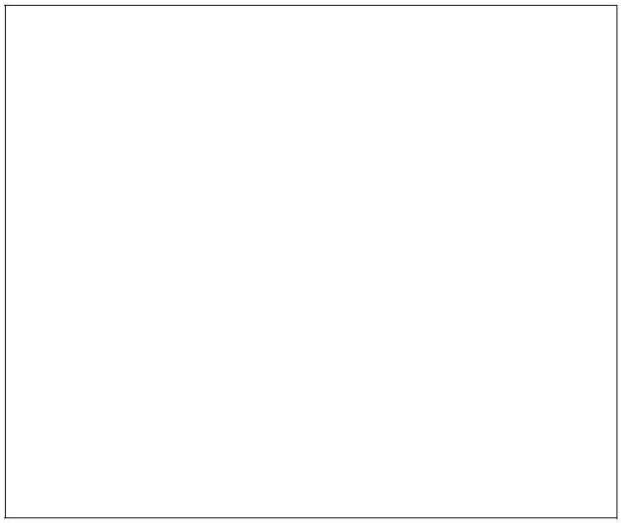
Remarks: Inspected anomaly numbers

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	

Passed Inspection: Yes

Draw the approximate location(s) of above items where answered Yes



Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: R19	Date: January 2005
Start: 11 January 2005	**Completion:** 11 January 2005	Page 1 of __1__ Pages

Personnel: Kendall, Vroman, Smith, Fox

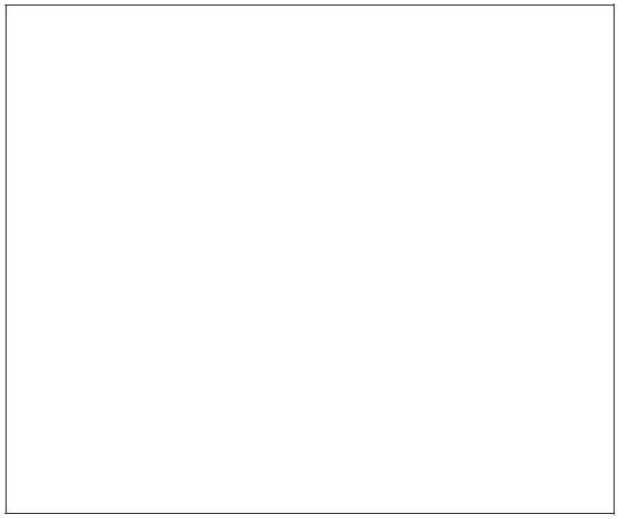
UXO Supervisor: Funk

Remarks: Inspected anomaly numbers

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	
Passed Inspection: Yes			

Draw the approximate location(s) of above items where answered Yes



Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: R20	Date: January 2005
Start: 11 January 2005	**Completion:** 11 January 2005	Page 1 of __1__ Pages

Personnel: Kendall, Vroman, Smith, Fox

UXO Supervisor: Funk

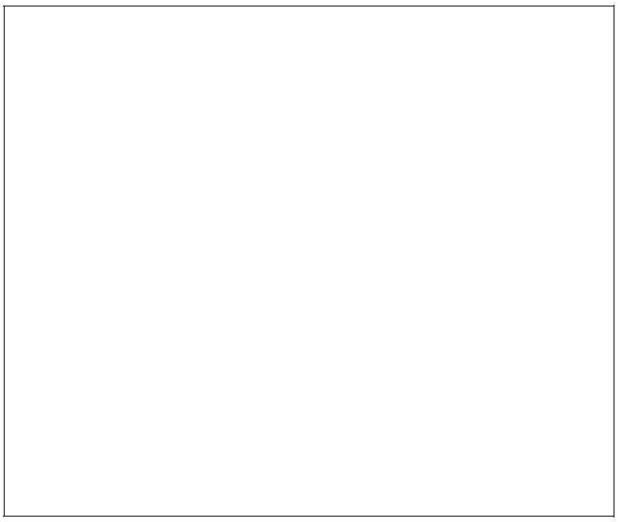
Remarks: Inspected anomaly numbers

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	

Passed Inspection: Yes

Draw the approximate location(s) of above items where answered Yes



Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: S12	Date: 19 January 2005
Start: 18 January 2005	**Completion:** 18 January 2005	Page 1 of __1__ Pages

Personnel: Kendall, Vroman, Smith, Fox

UXO Supervisor: Funk

Remarks: Inspected anomaly numbers 1, 4, 8, 10 and 18. (100%)

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	

Passed Inspection: Yes

Draw the approximate location(s) of above items where answered Yes

Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: S18	Date: January 2005
Start: 12 January 2005	**Completion:** 12 January 2005	Page 1 of __1__ Pages

Personnel: Kendall, Vroman, Smith, Fox

UXO Supervisor: Funk

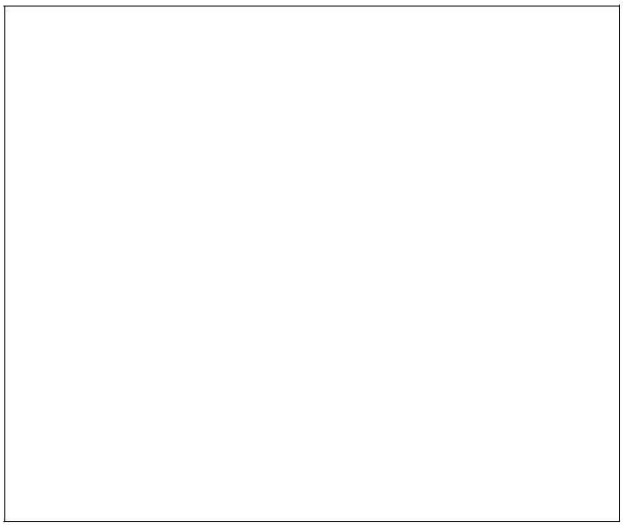
Remarks: Inspected anomaly numbers

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	

Passed Inspection: Yes

Draw the approximate location(s) of above items where answered Yes



Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: S20	Date: January 2005
Start: 11 January 2005	**Completion:** 11 January 2005	Page 1 of __1__ Pages

Personnel: Kendall, Vroman, Smith, Fox

UXO Supervisor: Funk

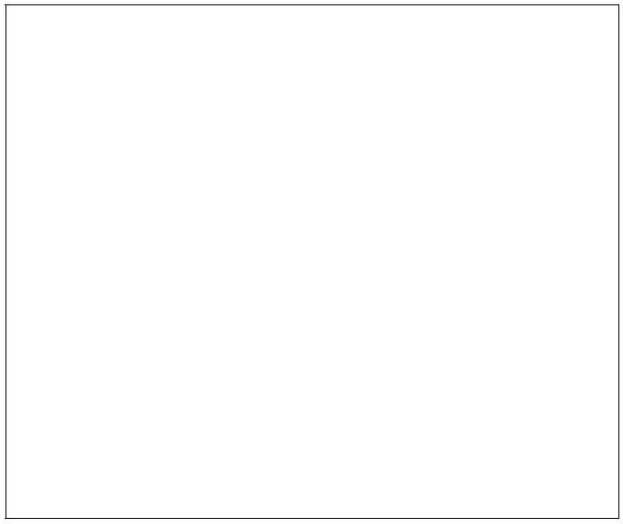
Remarks: Inspected anomaly numbers

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	

Passed Inspection: Yes

Draw the approximate location(s) of above items where answered Yes



Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: T17	Date: January 2005
Start: 17 January 2005	**Completion:** 17 January 2005	Page 1 of __1__ Pages

Personnel: Schwalm, Moral, Childers

UXO Supervisor: Gipson

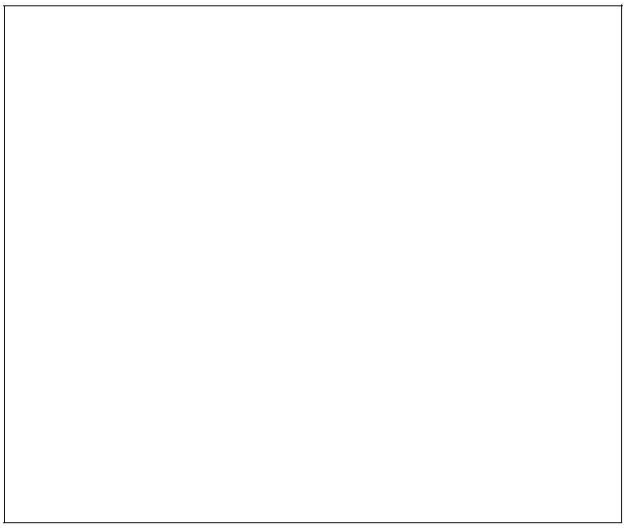
Remarks: Inspected anomaly numbers

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	

Passed Inspection: Yes

Draw the approximate location(s) of above items where answered Yes



Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: T18	Date: January 2005
Start: 17 January 2005	**Completion:** 17 January 2005	Page 1 of __1__ Pages

Personnel: Schwalm, Moral, Childers

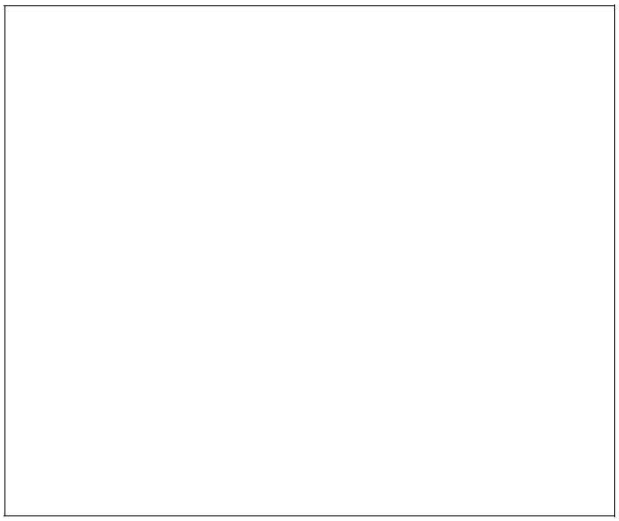
UXO Supervisor: Gipson

Remarks: Inspected anomaly numbers

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	
Passed Inspection: Yes			

Draw the approximate location(s) of above items where answered Yes



Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: Lot 17 , Pit 1	Date: 20 January 2005
Start: 20 January 2005	**Completion:** 20 January 2005	Page 1 of __1__ Pages

Personnel: Doak, Locklear

UXO Supervisor: Yates

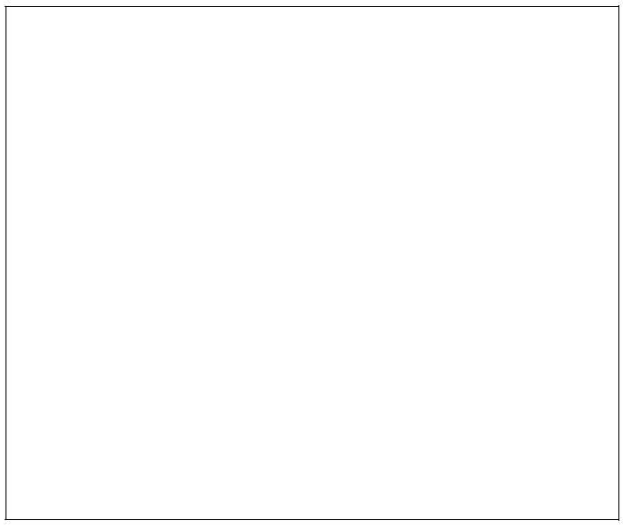
Hours: 30

Remarks:

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	
Passed Inspection: Yes			

Draw the approximate location(s) of above items where answered Yes



Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: Lot 17 , Pit 2	Date: 12 January 2005
Start: 11 January 2005	**Completion:** 12 January 2005	Page 1 of __1__ Pages

Personnel: Doak, Locklear

UXO Supervisor: Yates

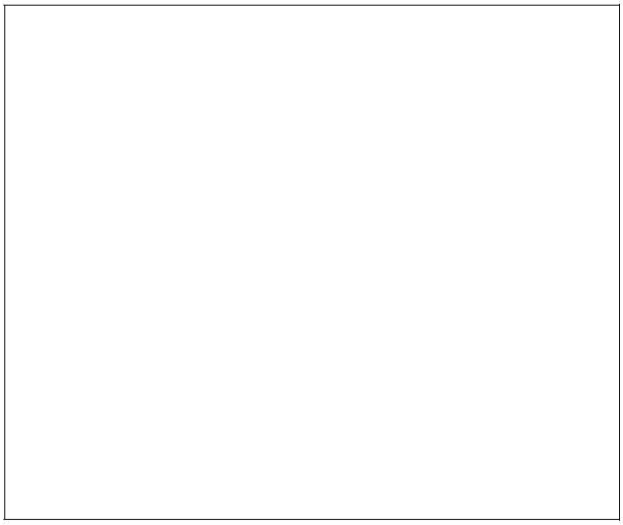
Hours: 24

Remarks:

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	
Passed Inspection: Yes			

Draw the approximate location(s) of above items where answered Yes



Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: Lot 17 , Pit 3	Date: 10 January 2005
Start: 10 January 2005	**Completion:** 10 January 2005	Page 1 of __1__ Pages

Personnel: Doak, Locklear

UXO Supervisor: Yates

Hours: 30

Remarks:

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	

Passed Inspection: Yes

Draw the approximate location(s) of above items where answered Yes

Southwest Corner 100' x 100' Grid

QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING **QC Inspection Record**

Work Area Camp Croft	Grid Number: Lot 40, Pit 1	Date: 26 January 2005
Start: 24 January 2005	**Completion: 26** January 2005	Page 1 of __1__ Pages

Personnel: Doak, Locklear

UXO Supervisor: Yates

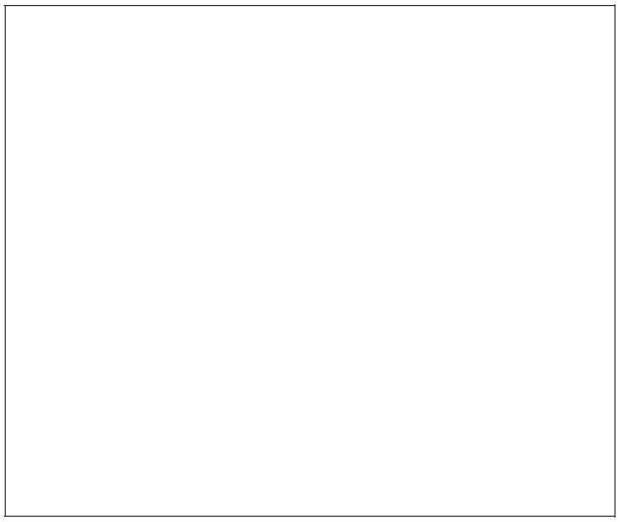
Hours: 75

Remarks:

Quality Control Results

Item	Yes	No	Qty
OEW Encountered		X	
Anomalies Detected		X	
Passed Inspection: Yes			

Draw the approximate location(s) of above items where answered Yes



Southwest Corner 100' x 100' Grid

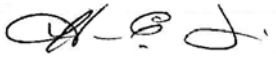
QC Officer: Herman E. Linker Signature

ZAPATAENGINEERING
DAILY QUALITY CONTROL LOG

DATE: 10 January 2005	**PROJECT:** Camp Croft
SUXOS: Doug McQue	**PM:** Jeff Schwalm
SSO: Terry Farmer	**QCS:** Herman E. Linker
MAG TYPE USED: Schonstedt 52CX	**MAG SETTING USED:** 4 out of 5

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Morning Magnetometer check	**1, 2, 3**	X	
Vehicle condition (weekly)	**1, 2, 3**	X	
Equipment condition	**1, 2, 3**	X	
Proper grid layout / GEO Re-locating	**1, 2, 3**	X	
Proper search techniques / Site control (daily)	**1, 2, 3**	X	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot	**3**	X	
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data	**1, 2, 3**	X	
UXO scrap inspection (daily)	**1, 2, 3**	X	
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

REMARKS: Pit # 3, Lot 17 passed a QC and QA inspection.

QCS SIGNATURE: 

ZAPATAENGINEERING
DAILY QUALITY CONTROL LOG

DATE: 12 January 2005	**PROJECT:** Camp Croft
SUXOS: Doug McQue	**PM:** Jeff Schwalm
SSO: Terry Farmer	**QCS:** Herman E. Linker
MAG TYPE USED: Schonstedt 52CX	**MAG SETTING USED:** 4 out of 5

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Morning Magnetometer check	**1, 2, 3**	X	
Vehicle condition (weekly)			
Equipment condition	**1, 2, 3**	X	
Proper grid layout / GEO Re-locating	**1, 2, 3**	X	
Proper search techniques / Site control (daily)	**1, 2, 3**	X	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot	**3**	X	
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)	**1, 2, 3**	X	
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

REMARKS: Pit # 2, Lot 17 passed a QC and QA inspection. Herman Linker assumed duties as full time QC.

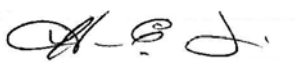
QCS SIGNATURE: 

ZAPATAENGINEERING
DAILY QUALITY CONTROL LOG

DATE: 13 January 2005	**PROJECT:** Camp Croft
SUXOS: Doug McQue	**PM:** Jeff Schwalm
SSO: Terry Farmer	**QCS:** Herman E. Linker
MAG TYPE USED: Schonstedt 52CX	**MAG SETTING USED:** 4 out of 5

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Morning Magnetometer check	**1, 2, 3**	X	
Vehicle condition (weekly)			
Equipment condition	**1, 2, 3**	X	
Proper grid layout / GEO Re-locating	**3**	X	
Proper search techniques / Site control (daily)	**1, 2**	X	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot	**3**	X	
Grid QC		X	
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)	**1, 2, 3**	X	
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

REMARKS: Pits 4 and 5, Lot 17 were given a QC inspection and found to be geological (hot dirt).

QCS SIGNATURE: 

ZAPATAENGINEERING
DAILY QUALITY CONTROL LOG

DATE: 17 January 2005	**PROJECT:** Camp Croft
SUXOS: Doug McQue	**PM:** Jeff Schwalm
SSO: Terry Farmer	**QCS:** Herman E. Linker
MAG TYPE USED: Schonstedt 52CX	**MAG SETTING USED:** 4 out of 5

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Morning Magnetometer check	**All**	**X**	
Vehicle condition (weekly)			
Equipment condition	**All**	**X**	
Proper grid layout / GEO Re-locating	**3/Geo**	**X**	
Proper search techniques / Site control (daily)	**1, 2**	**X**	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot	**3**	**X**	
Grid QC		**X**	
Office paper work (weekly)			
Mapping and UXO grid data	**All**	**X**	
UXO scrap inspection (daily)	**All**	**X**	
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

REMARKS: New guidance from office on the procedures for digging "no contacts" will now dig 1 ft on the flag and remag. Additionally guidance from office small wire, hot rocks and nails are not what geo(chi reading) is finding, so these items being reported are "probably" not the anomaly in question for any given flag. Received grid data file from office will start as of today.

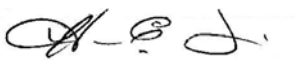
QCS SIGNATURE: 

ZAPATAENGINEERING
DAILY QUALITY CONTROL LOG

DATE: 18 January 2005	**PROJECT:** Camp Croft
SUXOS: Doug McQue	**PM:** Jeff Schwalm
SSO: Terry Farmer	**QCS:** Herman E. Linker
MAG TYPE USED: Schonstedt 52CX	**MAG SETTING USED:** 4 out of 5

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Morning Magnetometer check	**All**	**X**	
Vehicle condition (weekly)			
Equipment condition	**All**	**X**	
Proper grid layout / GEO Re-locating	**2/Geo**	**X**	
Proper search techniques / Site control (daily)	**1, 3**	**X**	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot	**3**	**X**	
Grid QC		**X**	
Office paper work (weekly)			
Mapping and UXO grid data	**All**	**X**	
UXO scrap inspection (daily)	**All**	**X**	
Field office grounds/site trailer		**X**	
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

REMARKS: Performed a QC inspection of pit # 6 and # 7. Both Pits passed. Informed by office that a DA Form 948 will not be issued for anything other than pits 1, 2 and 3., the remainder of the pits will be QA'd along with the rest of the grid.

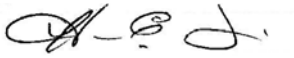
QCS SIGNATURE: 

ZAPATAENGINEERING
DAILY QUALITY CONTROL LOG

DATE: 19 January 2005	**PROJECT:** Camp Croft
SUXOS: Doug McQue	**PM:** Jeff Schwalm
SSO: Terry Farmer	**QCS:** Herman E. Linker
MAG TYPE USED: Schonstedt 52CX	**MAG SETTING USED:** 4 out of 5

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE)			
Morning Magnetometer check	All	X	
Vehicle condition (weekly)			
Equipment condition	All	X	
Emergency equipment, first aid kit, burn kit, fire ext.			
Proper grid layout / GEO Re-locating	Geo	X	
Proper search techniques / Site control (daily)	1, 2, 3	X	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot	3	X	
Grid QC		X	
Office paper work (weekly)			
Mapping and UXO grid data	All	X	
UXO scrap inspection (daily)	All	X	
Field office grounds/site trailer		X	
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

REMARKS:

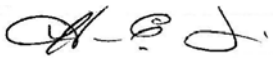
QCS SIGNATURE: 

ZAPATAENGINEERING
DAILY QUALITY CONTROL LOG

DATE: 20 January 2005	**PROJECT:** Camp Croft
SUXOS: Doug McQue	**PM:** Jeff Schwalm
SSO: Terry Farmer	**QCS:** Herman E. Linker
MAG TYPE USED: Schonstedt 52CX	**MAG SETTING USED:** 4 out of 5

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE)	All	X	
Morning Magnetometer check	All	X	
Vehicle condition (weekly)	All	X	
Equipment condition	All	X	
Emergency equipment, first aid kit, burn kit, fire ext.	All	X	
Proper grid layout / GEO Re-locating	Geo	X	
Proper search techniques / Site control (daily)	1, 2, 3	X	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot	3	X	
Grid QC		X	
Office paper work (weekly)		X	
Mapping and UXO grid data	All	X	
UXO scrap inspection (daily)	All	X	
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

REMARKS: Performed a QC inspections of Grid 17, Pit #1. Turned over to QA passed both inspections. Pits in Grid 17 complete.

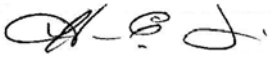
QCS SIGNATURE: 

ZAPATAENGINEERING
DAILY QUALITY CONTROL LOG

DATE: 24 January 2005	**PROJECT:** Camp Croft
SUXOS: Doug McQue	**PM:** Jeff Schwalm
SSO: Terry Farmer	**QCS:** Herman E. Linker
MAG TYPE USED: Schonstedt 52CX	**MAG SETTING USED:** 4 out of 5

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE)	**All**	**X**	
Morning Magnetometer check	**All**	**X**	
Vehicle condition (weekly)			
Equipment condition	**All**	**X**	
Emergency equipment, first aid kit, burn kit, fire ext.	**All**	**X**	
Proper grid layout / GEO Re-locating	**Geo**	**X**	
Proper search techniques / Site control (daily)	**1, 2, 3**	**X**	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot	**3**	**X**	
Grid QC		**X**	
Office paper work (weekly)			
Mapping and UXO grid data	**All**	**X**	
UXO scrap inspection (daily)	**All**	**X**	
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

REMARKS: Performed a QC inspection of the pit in Grid S16 (anomaly #1) passed. Local sheriff dept performed demo operations on wp grenade found in same pit. Instructed to not qc grids anymore, QC is being accomplished by the geo crew and QA.

QCS SIGNATURE: 

Quality Control Inspection Record Continuation Sheet 24 Jan 05

Remarks: S14-C23(Geo), S14-C35(Geo).
S15-C4(NC), S15-C21(ok), S15-C28(Geo), S15-C55(Geo), S15-C43(Geo), S15-C48(Geo).
T15-8(Geo), T15-10(Geo), T15-11(Geo), T15-39(Geo), T15-42(ok)
T16-1(ok), T16-9(ok), T16-18(Geo), T16-24(Geo)

ZAPATAENGINEERING
DAILY QUALITY CONTROL LOG

DATE: 25 January 2005	**PROJECT:** Camp Croft
SUXOS: Doug McQue	**PM:** Jeff Schwalm
SSO: Terry Farmer	**QCS:** Herman E. Linker
MAG TYPE USED: Schonstedt 52CX	**MAG SETTING USED:** 4 out of 5

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE)	All	X	
Morning Magnetometer check	All	X	
Vehicle condition (weekly)			
Equipment condition	All	X	
Emergency equipment, first aid kit, burn kit, fire ext.	All	X	
Proper grid layout / GEO Re-locating			
Proper search techniques / Site control (daily)	1, 2, 3	X	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC		X	
Office paper work (weekly)			
Mapping and UXO grid data	All	X	
UXO scrap inspection (daily)	All	X	
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

REMARKS: Turned over the following grids for QA T15, 16, 17, 18, S12, 13, 18, 19, 20, R11, 12, 13, 19, 20, P11, 12, 21, 22, N11, 12, 21, 22 and M22. The following grids passed a QA inspection N11, N12, S12, S13, T15, T16, T17 and T18. Given approval from COE to move teams within 100' of each other.

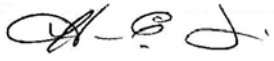
QCS SIGNATURE: 

ZAPATAENGINEERING
DAILY QUALITY CONTROL LOG

DATE: 26 January 2005	**PROJECT:** Camp Croft
SUXOS: Doug McQue	**PM:** Jeff Schwalm
SSO: Terry Farmer	**QCS:** Herman E. Linker
MAG TYPE USED: Schonstedt 52CX	**MAG SETTING USED:** 4 out of 5

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE)	**All**	X	
Morning Magnetometer check	**All**	X	
Vehicle condition (weekly)			
Equipment condition	**All**	X	
Emergency equipment, first aid kit, burn kit, fire ext.	**All**	X	
Proper grid layout / GEO Re-locating			
Proper search techniques / Site control (daily)	**1, 2, 3**	X	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC		X	
Office paper work (weekly)			
Mapping and UXO grid data	**All**	X	
UXO scrap inspection (daily)	**All**	X	
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

REMARKS: The pit in area 40 passed a QC and A QA inspection. The following grids given to QA for an inspection, L16, 17, M17, N17, R18, S14, 15 and 16.

QCS SIGNATURE: 

Quality Control Inspection Record Continuation Sheet 31 Jan 05

Remarks: R17-C10(ok), R17-C11(0k).

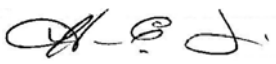
The Green anomaly was R16-C4 (AKA R16-4).

ZAPATAENGINEERING
DAILY QUALITY CONTROL LOG

DATE: 1 February 2005	**PROJECT:** Camp Croft
SUXOS: Doug McQue	**PM:** Jeff Schwalm
SSO: Terry Farmer	**QCS:** Herman E. Linker
MAG TYPE USED: Schonstedt 52CX	**MAG SETTING USED:** 4 out of 5

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE)	**All**	**X**	
Morning Magnetometer check	**All**	**X**	
Vehicle condition (weekly)			
Equipment condition	**All**	**X**	
Emergency equipment, first aid kit, burn kit, fire ext.	**All**	**X**	
Proper grid layout / GEO Re-locating			
Proper search techniques / Site control (daily)	**1, 2**	**X**	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data	**All**	**X**	
UXO scrap inspection (daily)	**All**	**X**	
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

REMARKS: The following grids were turned over for a QA inspection J22, K22, K23, L21, L22, L23, M22, N13, N14, P13 and P15. Team 1, began intrusive operations on the data gap areas in 35P1, 3 & 4. Inspected anomalies K23-C1(ok), K23-C3(ok), K23-C6(ok), K23-C7(ok), L23-C2(ok), L23-C4(ok), L23-C6(Geo), L21-1(ok).

QCS SIGNATURE: 

Quality Control Inspection Record Continuation Sheet 2 Feb 05

Remarks: P14-165(ok), P14-C18 (ok), P14-C26 (NC), P14-C40 (Geo), P14-C53 (Geo)
High number of No Contacts (NC) attributed to previously dug contacts and multiple flags on single anomalies.

Data Gap areas in 35P1, 3, 35P4, GC2, area 17 and area 40 complete.

Observed scrap inspection process for all OE and Non-OE scrap removed from the Site. No deficiencies noted.

APPENDIX F2
QA INSPECTION FORMS (USAESCH FORM 948)

GRIDS TURNED OVER FOR GOVERNMENT QA INSPECTION

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
ZAPATA	2 FEB 05	1000

CONTRACT NUMBER:	PROJECT LOCATION:
DACA 87-00-D-0034	FORMER CAMP CROFT SPARTANBURG, SC
DO #: 0014	

SUBJECT ITEM(S) (Check all that apply):

- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

PROJECT 948 #2

DESCRIPTION: THE FOLLOWING GRIDS WERE TURNED OVER FOR GOVERNMENT QA INSPECTION TODAY: K21, N15, AND P14 (3 TOTAL GRIDS) – NOTHING FOLLOWS

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED:

Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96

COPY 1 - Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO: ZAPATA	DATE: 1 FEB 05	TIME: 1500

CONTRACT NUMBER: DACA87-00-D-0034	PROJECT LOCATION: FORMER CAMP CROFT SPARTANBURG, SC
DO #: 0014	

SUBJECT ITEM(S) (Check all that apply):

- ☐ Work Plan
- ☒ Quality Control
- ☐ Safety Violation
- ☐ Other
- ☐ Safety Comments

PROJECT 948 #11

DESCRIPTION: THE FOLLOWING GRIDS WERE TURNED OVER FOR GOVERNMENT QA INSPECTION TODAY: J22, K22, K23, L21, L22, L23, M22, N13, N14, P13, AND P15 (11 TOTAL GRIDS) + NOTHING FOLLOWS

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED:

Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96

COPY 1 - Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
ZAPATA	27JAN05	1655

CONTRACT NUMBER:	PROJECT LOCATION:
DACA87-00-D-0034	FORMER CAMP CROFT SPARTANBURG, SC.
DO #: 0014	

SUBJECT ITEM(S) (Check all that apply):

- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

PROJECT 948 #10

DESCRIPTION: THE FOLLOWING GRIDS WERE TURNED OVER FOR GOVERNMENT QA INSPECTION TODAY: M15 M16, N15, N16, N18, P14, P15, P16, P17 R14, R15, R16, R17, & S17 (14 TOTAL GRIDS)

NOTHING FOLLOWS

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED:

Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96 **COPY 1 - Contractor's Representative**

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
ZAPATA	26JAN05	1030

CONTRACT NUMBER:	PROJECT LOCATION:
DACA87-00-D-0034	FORMER CAMP CROFT
DO #: 0014	SPARTANBURG, SC

SUBJECT ITEM(S) (Check all that apply):

- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

PROJECT 948 # 8

DESCRIPTION: THE FOLLOWING GRIDS WERE TURNED OVER FOR GOVERNMENT QA INSPECTION TODAY: L16, L17, M17, M18, N17, R18, S14, S15, & S16 (9 TOTAL GRIDS) — NOTHING FOLLOWS —

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED:

Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96

COPY 1 - Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
ZAPATA	25 JAN 05	0845

CONTRACT NUMBER:	PROJECT LOCATION:
DACA87-00-D-0034	FORMER CAMP CROFT
DO #: 0014	SPARTANBURG, SC

SUBJECT ITEM(S) (Check all that apply):

- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

PROJECT 948 #5

DESCRIPTION: THE FOLLOWING GRIDS WERE TURNED OVER FOR GOVERNMENT QA INSPECTION TODAY: M22, N11, N12, N21, N22, P11, P12, P21, P22, R11, R12, R13, R19, R20, S12, S13, S18, S19, S20, T15, T16, T17, & T18 (23 TOTAL GRIDS) – NOTHING FOLLOWS

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED:

Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96 **COPY 1 - Contractor's Representative**

GRIDS PASSED

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
ZAPATA	26 JAN 05	1000

CONTRACT NUMBER:	PROJECT LOCATION:
DACA87-00-D-0034	FORMER CAMP CROFT
DO #: 0014	SPARTANBURG, SC.

SUBJECT ITEM(S) (Check all that apply):

- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

PROJECT 948 #7

DESCRIPTION: THE LONE PIT ON LOT 40 PASSED A GOVERNMENT QA INSPECTION TODAY.

NOTHING FOLLOWS

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED:

Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96

COPY 1 - Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
ZAPATA	20 JAN 05	1115

CONTRACT NUMBER:	PROJECT LOCATION:
DACA87-00-D-0034	FORMER CAMP CROFT
DO #: 0014	SPARTANBURG, SC.

SUBJECT ITEM(S) (Check all that apply):

- ☐ Work Plan
- ☒ Quality Control
- ☐ Safety Violation
- ☐ Other
- ☐ Safety Comments

PROJECT 948 #4

DESCRIPTION: PIT #1 ON LOT 17 PASSED A GOVERNMENT QA INSPECTION TODAY. THIS IS THE LAST PIT OF THE 3 ON THIS LOT. -NOTHING FOLLOWS-

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED:

Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96

COPY 1 - Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
ZAPATA	12 JAN 05	1400

CONTRACT NUMBER:	PROJECT LOCATION:
DACA87-00-D-0034	FORMER CAMP CROFT
DO #: 0014	SPARTANBURG, SC

SUBJECT ITEM(S) (Check all that apply):

- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

PROJECT 948 #3

DESCRIPTION: PIT #2 ON LOT 17 PASSED A GOVERNMENT QA INSPECTION TODAY

NOTHING FOLLOWS

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED:

Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96

COPY 1 - Contractor's Representative

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
ZAPATA	10 JAN 05	1705

CONTRACT NUMBER:	PROJECT LOCATION:
DACA87-00-D-0034	FORMER CAMP CROFT
DO #: 0014	SPARTANBURG, SC

SUBJECT ITEM(S) (Check all that apply):

- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

PROJECT 948 #2.

DESCRIPTION: PIT #3 ON LOT 17 PASSED A GOVERNMENT QA INSPECTION TODAY.
NOTHING FOLLOWS

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED:

Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96 **COPY 1 - Contractor's Representative**

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO:	DATE:	TIME:
ZAPATA	25 JAN05	1530

CONTRACT NUMBER:	PROJECT LOCATION:
DACA87-00-D-0034	FORMER CAMP CROFT
DO #: 0014	SPARTANBURG, SC.

SUBJECT ITEM(S) (Check all that apply):

- ☐ Work Plan
- ☒ Quality Control
- ☐ Safety Violation
- ☐ Other
- ☐ Safety Comments — PROJECT 948 #6

DESCRIPTION: THE FOLLOWING GRIDS PASSED A GOVERNMENT QA INSPECTION TODAY: N11, N12, S12, S13, T15, T16, T17, & T18 (8 TOTAL GRIDS) L NOTHING FOLLOWS

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED: 1

Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96 **COPY 1 - Contractor's Representative**

U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
ORDNANCE AND EXPLOSIVE GROUP
MEMO

TO: ZAPATA	DATE: 26 JAN 05	TIME: 1610

CONTRACT NUMBER: DACA87-00-D-0034	PROJECT LOCATION: FORMER CAMP CROFT SPARTANBURG, SC
DO #: 0014	

SUBJECT ITEM(S) (Check all that apply):

- ☐ Work Plan
- ☐ Safety Violation
- ☐ Safety Comments
- ☒ Quality Control
- ☐ Other

PROJECT 948 #9

DESCRIPTION: THE FOLLOWING GRIDS PASSED A GOVERNMENT QA INSPECTION TODAY: M22, N21 N22, P21, P22, R11, R12, R13, R19, R20, S18, S19, & S20 (13 TOTAL GRIDS) NOTHING FOLLOWS

☐ Prompt correction or compliance with contract specifications is requested.

USACE Site Representative

RECEIPT ACKNOWLEDGED:

Contractor's Representative

ACTION TAKEN:

CEHNC FORM 948 (Revised) 1 APR 96 **COPY 1 - Contractor's Representative**

APPENDIX F3
QC GEOPHYSICAL DATA

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: J22
Prepared By: RVH and DAS
Date: 01/12/05 and 02/22/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.45	Y		1/12/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	N	Lines 1.5 and 7.5 have minor errors.	1/12/2005	RVW das
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	nails placed	Y	No data collected over # 1.	1/12/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of ZapataEngineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	nails placed	Y	# 2 not seen on line 31.5 or 37.5; # 3 not seen on line 27 or 33.	1/12/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Gap checks w/l radius of tree		das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤3.50 mV Ch 2 ≤2.75 mV Ch 3 ≤1.75 mV Sum of Channels 1,2,3 ≤8.00 mV	2.25 1.68 1.29 4.35	Y Y Y Y		1/12/2005 1/12/2005 1/12/2005 1/12/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Daily Field QC Procedures)

Site: Former Camp Croft, SC
Grid: J-22
Prepared By: D. Wolf
Date: 12/10/2004

	Date Collected	Time	Metric	Pass (Y or N)
Static/Standard Test	11/30/2004	AM	20% of all measurements	
			Channel 1 - 4 mV	Y
			Channel 2 - 2.5 mV	Y
			Channel 3 - 1.3 mV	Y
			Channel 4 - 0.5 mV	NA
Static/Standard Test	11/30/2004	PM	20% of all measurements	
			Channel 1 - 3.75 mV	Y
			Channel 2 - 2.1 mV	Y
			Channel 3 - 1 mV	Y
			Channel 4 - 0.4 mV	NA
Repeat Line Test	11/30/2004			Y

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: J-22
Prepared By: D. Wolf
Date: 12/10/2004

Number of lines	47
5% of lines	2.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
31.5	8:04:27	0:00:07	25	3.571428571	2.435714286
	8:04:34				
49.5	7:57:49	0:00:07	25	3.571428571	2.435714286
	7:57:56				
82.5	7:47:50	0:00:07	25	3.571428571	2.435714286
	7:47:57				

average velocity (mph)	2.44

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: J-22
Prepared By: D. Wolf
Date: 12/10/2004

Nail Locations (origin SW corner)

x(UTM m)	421393.30
y(UTM m)	3863354.00

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (m)	y(m)	x (utm m)	y(utm m)	Distance from target to nail (m)
1	30	100	9.144	30.48	421402.44	3863384.48	0.3
2	15	70	4.572	21.336	421397.87	3863375.34	0
3	2	24	0.6096	7.3152	421393.91	3863361.32	0

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: J-22
Prepared By: D. Wolf
Date: 12/10/2004

Camp Croft Background Response Statistics and Noise Estimates

Grid J22

Polygon 1

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-0.64	2.09	0.44	0.44	0.30	0.45	0.51	2.66	281.00	0.00	1.35
Channel 2	-1.12	1.84	0.35	0.36	0.21	0.44	0.48	2.41	281.00	0.00	1.32
Channel 3	-0.43	1.20	0.29	0.28	0.16	0.33	0.37	1.78	281.00	0.00	0.99
Sum Channel	-1.60	3.55	1.08	1.08	0.81	0.93	1.05	5.49	281.00	0.00	2.79

Polygon 2

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-0.84	1.31	0.46	0.50	0.53	0.45	0.53	2.40	132.00	1.00	1.35
Channel 2	-0.97	1.51	0.31	0.37	0.32	0.43	0.52	2.91	132.00	1.00	1.29
Channel 3	-1.02	1.23	0.29	0.29	0.31	0.32	0.32	1.54	132.00	1.00	0.96
Sum Channel	-2.53	3.28	1.06	1.10	0.92	0.91	1.10	5.75	132.00	1.00	2.73

Average of Two Polygon Areas

Channel	*Noise Estimate*
Channel 1	1.35
Channel 2	1.31
Channel 3	0.98
Sum Channel	2.76

Background Noise Metric

	Polgon 1	Polgon 2	Average
Mean of Sum	1.08	1.06	1.07
Std. dev. Of Sum	0.93	0.91	0.92

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: J-22
Prepared By: D. Wolf
Date: 12/10/2004

Number of obstructed (affected) lines	29
20% of affected lines	5.8

Line

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: K21
Prepared By: MAV and RVW
Date: 01/18/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.63	Y		1/14/2005	MAV
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y	Normal positioning	1/14/2005	MAV das
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	No nails in grid	N/A	Small, partial grid; adjacent grid satisfies control	1/18/2005	RVW das
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of ZapataEngineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	No nails in grid	N/A	Small, partial grid	1/18/2005	RVW das
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations			Lg. Data gap, x=75, larger in field than on map. No problem w/ target, area to be swept.		das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	2.1 1.59 1.11 3.72	Y Y Y Y		1/14/2005 1/14/2005 1/14/2005 1/14/2005	MAV MAV MAV MAV

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: K21
Prepared By: MAV and RVW
Date: 01/18/05

Number of lines	29
5% of lines	1.45

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
69	10:12:17	0:00:13	49	3.77	2.57
	10:12:29				
84	9:58:45	0:00:19	75	3.95	2.69
	9:59:04				

average velocity (mph)	2.63

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: K21
Prepared By: MAV and RVW
Date: 01/18/05

Nail Locations (origin SW corner)								
x(UTM m)								
y(UTM m)								
	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1								
2								
3								
4								
5								
ND=non-detect								

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: K21
Prepared By: MAV and RVW
Date: 01/18/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	Minimum	Maximum	Mean	Median	Mode	Std.dev.	1st diff.StD.	4th diff.StD.	# of points	# of dummies	Noise Estimate
Channel 1	-2.19	3.51	0.51	0.54	0.24	0.70	0.47	2.13	1295	12	2.10
Channel 2	-1.15	2.22	0.36	0.32	0.01	0.53	0.40	2.01	1295	12	1.59
Channel 3	-1.24	1.39	0.25	0.24	-0.01	0.37	0.32	1.60	1295	12	1.11
Sum Channel	-2.53	5.55	1.21	1.18	0.08	1.24	0.96	4.47	1295	12	3.72

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: K21
Prepared By: MAV and RVW
Date: 01/18/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: K22
Prepared By: RVW
Date: 01/12/05

Item #	Definable Feature of Work	QC Test or Procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed By:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.45	Y		1/12/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	N	Lines 1.5 and 7.5 have minor errors.	1/12/2005	RVW das
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	nails placed	Y	No data collected over # 1.	1/12/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	nails placed	Y	# 2 not seen on line 31.5 or 37.5; # 3 not seen on line 27 or 33.	1/12/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Gap checks within radius of tree		das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤3.50 mV Ch 2 ≤2.75 mV Ch 3 ≤1.75 mV Sum of Channels 1,2,3 ≤8.00 mV	2.25 1.68 1.29 4.35	Y Y Y Y		1/12/2005 1/12/2005 1/12/2005 1/12/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: K22
Prepared By: RVW
Date: 01/12/05

Number of lines	58
5% of lines	2.9

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
42	13:22:45	0:00:32	100	3.17	2.16
	13:23:17				
66	13:00:01	0:00:27	100	3.64	2.48
	13:00:29				
94.5	12:29:00	0:00:25	100	3.96	2.70
	12:29:25				

average velocity (mph)	2.45

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: K22
Prepared By: RVW
Date: 01/12/05

Nail Locations (origin SW corner)

x(UTM m) 421515.18
y(UTM m) 3863171.23

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	2	19	421515.80	3863176.98	No data collected over this nail			
2	35	26	421525.91	3863178.88	20	421525.69	3863179.29	0.47
3	30	50	421524.43	3863186.03	16	421524.32	3863186.15	0.16

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: K22
Prepared By: RVW
Date: 01/12/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-2.26	3.46	0.58	0.60	0.42	0.75	0.46	2.22	2194	3	2.25
Channel 2	-1.51	2.61	0.49	0.46	0.25	0.56	0.42	1.99	2194	3	1.68
Channel 3	-0.87	2.30	0.38	0.39	0.35	0.43	0.32	1.54	2194	3	1.29
Sum Channel	-3.44	7.04	1.34	1.37	0.60	1.45	1.00	4.46	2194	3	4.35

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: K22
Prepared By: RVW
Date: 01/12/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM QualityControl Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: K23
Prepared By: Rachel Woolf
Date: 01/12/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.59	Y		1/12/2005	RWW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See Attached Figure	1/12/2005	RWW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	Data not collected over #1-3. #4 offset = 0.15m; #5 offset = 0.21m; #6 offset = 0.15m.	Y		1/12/2005	RWW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	Additional anomalies near #1. #2 not detected on line 1.5. #3 not detected on line 0.	Y		1/12/2005	RWW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y		No data gaps	das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤3.50 mV	1.53	Y		1/12/2005	RWW
				Ch 2 ≤2.75 mV	1.23	Y		1/12/2005	RWW
				Ch 3 ≤1.75 mV	0.99	Y		1/12/2005	RWW
				Sum of Channels 1,2,3 ≤8.00 mV	3.12	Y		1/12/2005	RWW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: K23
Prepared By: Rachel Woolf
Date: 01/12/05

Number of lines	17
5% of lines	0.85

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
6	8:20:10	0:00:27	100	3.73	2.54
	8:20:37				
16.5	8:29:16	0:00:26	100	3.87	2.64
	8:29:42				

average velocity (mph)	2.59

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: K23
Prepared By: Rachel Woolf
Date: 01/12/05

Nail Locations (origin SW corner)

x(UTM m) 421301.94
y(UTM m) 3863354.09

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number		Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)	Ch 1Nail amp mV	SUM nail amp,	Nail half width, ft	Chi tgt?
1	-0.8	87	421545.40	3863197.72	Detected on line 0, Target # 5		421545.65	3863197.87	0.29	13	25	3	6
2	-1.6	63	421545.16	3863190.41	Detected on line 0, Target # 16		421545.65	3863190.56	0.51	3.7	7.8	2.4	N
3	-2.5	53	421544.88	3863187.36	No data collected over nail	ND							
4	4	94	421546.87	3863199.85		7	421546.72	3863199.85	0.15	11.00	21.00	2.00	5
5	13	62	421549.61	3863190.10		8	421549.76	3863189.95	0.21	11.00	22.00	2.50	N
6	2	21	421546.25	3863177.61		4	421546.1	3863177.61	0.15	14	28	3.5	N

ND=non-detect

On L 15, nail is half L 13 amp, mV

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: K23
Prepared By: Rachel Woolf
Date: 01/12/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.21	2.37	0.63	0.65	0.61	0.51	0.34	1.10	1634	1	1.53
Channel 2	-0.64	2.08	0.54	0.55	0.41	0.41	0.31	1.00	1634	1	1.23
Channel 3	-0.61	1.50	0.41	0.40	0.16	0.33	0.24	0.77	1634	1	0.99
Sum Channel	-2.11	4.61	1.47	1.39	1.18	1.04	0.10	2.32	1634	1	3.12

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: K23
Prepared By: Rachel Woolf
Date: 01/12/05

Total obstructions	NONE				
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: L16
Prepared By: RVW
Date: 01/12/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.4	Y		1/12/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See Attached Figure	1/12/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.		Y		1/12/2005	RVW das
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	3/3 nails in grid detected	Y		1/12/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Gap cleared by pit clearance.		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤3.50 mV Ch 2 ≤2.75 mV Ch 3 ≤1.75 mV Sum of Channels 1,2,3 ≤8.00 mV	3.27 2.01 1.17 3.96	Y Y Y Y		1/12/2005 1/12/2005 1/12/2005 1/12/2005	RVW RVW RVW RVW

Item 4: Field notes will be checked to see if swing set / pit area was covered in mag/dig. If not, gap will be re-investigated.

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: L16
Prepared By: RVW
Date: 01/12/05

Number of lines	56
5% of lines	2.8

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
55.5	16:59:40	0:00:21	75	3.53	2.41
	17:00:01				
66	16:53:57	0:00:25	90	3.53	2.41
	16:54:22				
94.5	16:30:26	0:00:21	75	3.50	2.39
	16:30:47				

average velocity (mph)	2.40

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: L16
Prepared By: RVW
Date: 01/12/05

Nail Locations (origin NE Corner, PLS stake 652; there is no SW Cor stake)

x(UTM m)
y(UTM m)

	In-situ nail locations, from NE COR stake						
nail_ID	x (ft)	y (ft)	x (m)	y(m)	x (utm m)	y(utm m)	Distance from anomaly to nail (m)
1	93 S	0.8 E					No data ; 20 ft outside grid
2	86 S	1.6 E					15 ft outside area
3	75 S	2.5E					2.5 ft E, not seen
4	69 S	0					0.4 m
5	61 S	6 W					< 0.4
6	50 S	6 W					< 0.4

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: L16
Prepared By: RVW
Date: 01/12/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-5.46	3.97	0.10	0.24	-0.06	1.09	0.53	1.83	1163	22	3.27
Channel 2	-2.83	2.74	0.07	0.07	0.13	0.67	0.37	1.34	1163	22	2.01
Channel 3	-1.25	1.63	0.09	0.07	-0.02	0.39	0.24	0.86	1163	22	1.17
Sum Channel	-6.68	5.58	0.34	0.47	0.09	1.32	0.80	2.61	1163	22	3.96

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: L16
Prepared By: RVW
Date: 01/12/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: L17
Prepared By: MAV and RVW
Date 01/17/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.05	Y		1/14/2005	MAV
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y	See Attached Figure	1/14/2005	MAV
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.		Y	Nail location sheet	1/17/2005	das
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails		Y	Nail location sheet	1/17/2005	das
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	NO GAPS		das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	3.51 2.1 1.32 4.17	Y Y Y Y		1/14/2005 1/14/2005 1/14/2005 1/14/2005	das MAV MAV MAV

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: L17
Prepared By: MAV and RVW
Date 01/17/05

Number of lines	37
5% of lines	1.85

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
6	8:50:08	0:00:26	75	2.88	1.97
	8:50:35				
27	8:59:32	0:00:16	50	3.13	2.13
	8:59:49				

average velocity (mph)	2.05

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: L17
Prepared By: MAV and RVW
Date 01/17/05

Grid L 17 Nail Locations (origin SW corner, established by tape from survey stake)								
x(UTM m)								
y(UTM m)								
	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail
1	0	41			12			0.5 ft
2	9	75			11			0.6 ft
3	9	100			nd off grid			0.00
4	48	100			nd off grid			0.00
5								0.00
ND=non-detect								

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: L17
Prepared By: MAV and RVW
Date 01/17/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-5.88	7.46	0.65	0.51	0.37	1.17	0.55	1.76	959	15	3.51
Channel 2	-3.70	4.58	0.35	0.44	0.36	0.70	0.37	1.33	959	15	2.10
Channel 3	-1.79	2.62	0.25	0.23	0.19	0.44	0.26	0.92	959	15	1.32
Sum Channel	-10.29	5.23	0.85	0.70	0.22	1.39	0.87	2.95	959	15	4.17

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: L17
Prepared By: MAV and RVW
Date 01/17/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: L21
Prepared By: MAV and RVW
Date: 01/17/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	1.52	Y		38366	MAV
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y	See Attached Figure	38366	MAV
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	No nails in grid	N/A	Very small partial grid	38369	das
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	No nails in grid	N/A	Very small partial grid	38369	das
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		NA	No gaps		das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	2.28 1.77 1.77 4.62	Y Y Y Y		38366 38366 38366 38366	MAV MAV MAV MAV

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: L21
Prepared By: MAV and RVW
Date: 01/17/05

Number of lines	2
5% of lines	0.1

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
99	9:40:31	0:00:09	20	2.22	1.52
	9:40:40				

average velocity (mph)	1.52

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: L21
Prepared By: MAV and RVW
Date: 01/17/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1								0.00
2								0.00
3								0.00
4								0.00
5								0.00

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: L21
Prepared By: MAV and RVW
Date: 01/17/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-0.36	2.02	0.55	0.39	0.02	0.76	0.52	2.24	18	0	2.28
Channel 2	-0.31	1.72	0.49	0.50	0.18	0.59	0.46	3.01	18	0	1.77
Channel 3	-0.48	1.27	0.36	0.14	-0.10	0.59	0.47	3.13	18	0	1.77
Sum Channel	-0.54	4.95	1.66	1.86	0.55	1.54	1.17	6.89	18	0	4.62

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: L21
Prepared By: MAV and RVW
Date: 01/17/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: L22
Prepared By: RVW
Date: 01/12/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	3	Y		1/12/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See Attached Figure	1/12/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	Data not collected over # 1. # 2 offset = 0.02m; # 3 offset = 0.48m	Y		1/12/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	# 2 not seen on lines 52.5 or 57. # 3 not see on lines 78 or 70.	Y		1/12/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Gap x = 8, y = 32 checks; no interference w/ anomaly		das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤3.50 mV	2.16	Y		1/12/2005	RVW
				Ch 2 ≤2.75 mV	1.59	Y		1/12/2005	RVW
				Ch 3 ≤1.75 mV	1.23	Y		1/12/2005	RVW
				Sum of Channels 1,2,3 ≤8.00 mV	4.29	Y		1/12/2005	RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: L22
Prepared By: RVW
Date: 01/12/05

Number of lines	61
5% of lines	3.05

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
12	15:24:45	0:00:21	100	4.70	3.21
	15:25:07				
18	15:29:51	0:00:14	72	4.98	3.40
	15:30:05				
82.5	12:42:31	0:00:26	100	3.84	2.62
	12:42:57				
93	12:30:06	0:00:25	100	4.07	2.78
	12:30:30				

average velocity (mph)	3.00

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: L22
Prepared By: RVW
Date: 01/12/05

Nail Locations (origin SW corner)

x(UTM m) 421515.18
y(UTM m) 3863201.69

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	38	3	421526.76	3863202.60	Data not collected over this nail			
2	55	20	421531.94	3863207.78	31	421531.92	3863207.79	0.02
3	75	20	421538.04	3863207.78	34	421537.58	3863207.63	0.48

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: L22
Prepared By: RVW
Date: 01/12/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.79	3.46	0.62	0.61	0.34	0.72	0.50	2.14	1670	14	2.16
Channel 2	-1.31	2.52	0.50	0.53	0.50	0.53	0.43	1.98	1670	14	1.59
Channel 3	-0.82	2.75	0.39	0.37	0.03	0.41	0.32	1.47	1670	14	1.23
Sum Channel	-3.50	6.82	1.47	1.44	1.12	1.43	1.06	4.60	1670	14	4.29

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: L22
Prepared By: RVW
Date: 01/12/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: L23
Prepared By: MQV and RVW
Date: 01/15/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.53	Y		1/14/2005	MAV
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y	See Attached Figure	1/14/2005	MAV
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	All offsets less than 0.5m. # 3 not detected.	Y		1/15/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	# 1 and # 2 not seen on line 1.5. # 3 not seen on 0. # 4 not seen on 4.5 or 9, # 5 not seen on 18 or 24. # 6 not seen on 6.	Y		1/15/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Partial grid, no gaps		das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	1.71 1.23 0.87 3.18	Y Y Y Y		1/14/2005 1/14/2005 1/14/2005 1/14/2005	MAV MAV MAV MAV

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: L23
Prepared By: MQV and RVW
Date: 01/15/05

Number of lines	17
5% of lines	0.85

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
9	8:23:08	0:00:27	100	3.70	2.53
	8:23:35				

average velocity (mph)	2.53

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: L23
Prepared By: MQV and RVW
Date: 01/15/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	-0.8	8	421545.44	3863204.12	11	421545.65	3863204.27	0.26
2	-1.6	27	421545.19	3863209.91	12	421545.65	3863210.06	0.48
3	-2.5	43	421544.92	3863214.78	Not Detected			
4	7	6	421547.82	3863203.51	6	421547.48	3863203.51	0.34
5	22	1	421552.38	3863201.98	8	421552.05	3863202.14	0.37
6	8	47	421548.11	3863216	7	421548.4	3863216.16	0.33

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: L23
Prepared By: MQV and RVW
Date: 01/15/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-0.97	3.32	0.66	0.64	0.68	0.57	0.37	1.21	1885	4	1.71
Channel 2	-0.85	2.09	0.52	0.50	0.47	0.41	0.30	1.03	1885	4	1.23
Channel 3	-0.43	1.62	0.36	0.34	0.32	0.29	0.23	0.81	1885	4	0.87
Sum Channel	-1.36	5.07	1.43	1.45	1.25	1.06	0.73	2.47	1885	4	3.18

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: L23
Prepared By: MQV and RVW
Date: 01/15/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: M14
Prepared By: MAV and RVW
Date: 01/17/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.27	Y		1/14/2005	MAV
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y	See Attached Figure	1/14/2005	MAV
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.		Y	Survey nail sheet	1/17/2005	das
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails		Y	See map	1/17/2005	das
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		NA	gaps insignificant		das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV	2.61	Y		1/14/2005	MAV
				Ch 2 ≤ 2.75 mV	2.28	Y		1/14/2005	MAV
				Ch 3 ≤ 1.75 mV	1.23	Y		1/14/2005	MAV
				Sum of Channels 1,2,3 ≤ 8.00 mV	5.25	Y		1/14/2005	MAV

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: M14
Prepared By: MAV and RVW
Date: 01/17/05

Number of lines	27
5% of lines	1.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
78	16:56:45 16:56:50	0:00:06	20	3.33	2.27

average velocity (mph)	2.27

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: M14
Prepared By: MAV and RVW
Date: 01/17/05

M 14 Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail
1	98	100			11			0.5 ft
2	74	88			12			1.4 ft
3								0.00
4								0.00
5								0.00

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: M14
Prepared By: MAV and RVW
Date: 01/17/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-2.36	2.82	0.77	0.77	0.66	0.87	0.45	0.79	290	12	2.61
Channel 2	-2.09	3.32	0.69	0.73	0.11	0.76	0.32	0.65	290	12	2.28
Channel 3	-0.92	1.36	0.37	0.36	0.24	0.41	0.20	0.43	290	12	1.23
Sum Channel	-5.31	5.63	1.63	1.76	0.73	1.75	0.86	1.56	290	12	5.25

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: M14
Prepared By: MAV and RVW
Date: 01/17/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: M15
Prepared By: MAV and RVW
Date: 01/17/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.99	Y		1/14/2005	MAV
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y	See Attached Figure	1/14/2005	MAV
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.		Y		1/17/2005	das
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails		Y		1/17/2005	das
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations	no data gaps		Small partial grid; good control by tapes.		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	1.86 1.29 0.87 3.54	Y Y Y Y		1/14/2005 1/14/2005 1/14/2005 1/14/2005	MAV MAV MAV MAV

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: M15
Prepared By: MAV and RVW
Date: 01/17/05

Number of lines	29
5% of lines	1.45

Line		time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
	90	15:37:26	0:00:20	80	4.00	2.73
		15:37:46				
	96	15:35:19	0:00:21	100	4.76	3.25
		15:35:40				

average velocity (mph)	2.99

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: M15
Prepared By: MAV and RVW
Date: 01/17/05

M 15 Nail Locations (from field book; origin NE Cor stake; no PLS SW Cor stake)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	97	50			10			1.0 ft
2	100	60			16			1.0 ft
3	94	75			14			< 1.0 ft
4	102.5	85			36 ?			0.5 ft coil edge ?
5	101.6	90			ND			0.00
6	100.8	94			ND ?			

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: M15
Prepared By: MAV and RVW
Date: 01/17/05

Camp Croft Background Response Statistics and Noise Estimates

Grids

Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-0.80	3.07	0.65	0.57	0.13	0.62	0.39	1.02	1290	17	1.86
Channel 2	-0.77	2.17	0.46	0.39	0.30	0.43	0.27	0.65	1290	17	1.29
Channel 3	-0.76	1.46	0.29	0.25	0.23	0.29	0.19	0.54	1290	17	0.87
Sum Channel	-1.48	5.36	1.34	1.23	0.73	1.18	0.74	1.84	1290	17	3.54

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: M15
Prepared By: MAV and RVW
Date: 01/17/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: M16
Prepared By: MAV and RVW
Date: 01/15/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.73	Y		1/14/2005	MAV
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y		1/14/2005	MAV
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	# 1 offset = 0.24; # 4 offset = 0.16; # 5 offset = 0.31	Y		1/15/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	# 1 not seen on line 1.5, # 2 and 3 not seen on line 0.	Y		1/15/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		NM	Gaps are over pits which were mag dug.		das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	2.76 1.86 1.2 3.87	Y Y Y Y		1/14/2005 1/14/2005 1/14/2005 1/14/2005	MAV MAV MAV MAV

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: M16
Prepared By: MAV and RVW
Date: 01/15/05

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
6	8:43:54	0:00:24	100	4.17	2.84
	8:44:18				
24	8:52:38	0:00:26	100	3.85	2.62
	8:53:03				
42	9:02:25	0:00:25	100	4.00	2.73
	9:02:50				

average velocity (mph)	2.73

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: M16
Prepared By: MAV and RVW
Date: 01/15/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	-0.8	97	421332.14	3863261.77	69	421332.38	3863261.76	0.24
2	-1.6	79	421331.89	3863256.28	Not detected, outside of boundary			
3	-2.5	57	421331.62	3863249.58	Not detected, outside of boundary			
4	3	65	421333.29	3863252.02	40	421333.45	3863252.01	0.16
5	6	52	421334.21	3863248.05	49	421334.21	3863248.36	0.31

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: M16
Prepared By: MAV and RVW
Date: 01/15/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-3.34	4.28	0.70	0.63	0.55	0.92	0.52	1.86	3009	26	2.76
Channel 2	-4.56	3.05	0.38	0.36	-0.04	0.62	0.43	1.72	3009	26	1.86
Channel 3	-1.67	1.99	0.24	0.24	-0.03	0.40	0.29	1.20	3009	26	1.20
Sum Channel	-3.44	5.30	0.87	0.75	0.11	1.29	0.93	3.44	3009	26	3.87
ALL	-3.44	5.30	0.87	0.75	0.11	1.29	0.93	3.44	3009	26	

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: M16
Prepared By: MAV and RVW
Date: 01/15/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: M17
Prepared By: MAV and RVW
Date: 01/17/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.6	Y		1/14/2005	MAV
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y		1/14/2005	MAV
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	placed	Y		1/17/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	placed	Y		1/17/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	End Gaps established by fid ropes and tapes.		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	2.55 1.71 1.2 3.69	Y Y Y Y		1/14/2005 1/14/2005 1/14/2005 1/14/2005	MAV MAV MAV MAV

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: M17
Prepared By: MAV and RVW
Date: 01/17/05

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
9	13:44:13	0:00:14	50	3.57	2.44
	13:44:26				
54	14:03:20	0:00:26	100	3.85	2.62
	14:03:46				
87	14:27:18	0:00:20	80	4.00	2.73
	14:27:38				

average velocity (mph)	2.60

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: M17
Prepared By: MAV and RVW
Date: 01/17/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (ft)
1	-1	6			26 No chi			1.40
2	0	20			28 no chi			0.60
3	-2	28			ND, off grid. = M 16 # 68?			
4	0	6			26.00			1.40
5	3	9			38.00			0.30
6	5	20			22			1.10

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: M17
Prepared By: MAV and RVW
Date: 01/17/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-2.27	4.81	0.69	0.68	0.46	0.85	0.45	1.62	3597	9	2.55
Channel 2	-2.75	2.84	0.45	0.51	0.10	0.57	0.32	1.15	3597	9	1.71
Channel 3	-3.07	2.62	0.31	0.37	0.19	0.40	0.24	0.86	3597	9	1.20
Sum Channel	-6.66	6.18	0.87	0.83	0.16	1.23	0.78	2.71	3597	9	3.69

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: M17
Prepared By: MAV and RVW
Date: 01/17/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: M18
Prepared By: MAV RVW
Date: 01/17/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.11	Y		1/14/2005	MAV
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y	See Attached Figure	1/14/2005	MAV
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	No nails in grid	N/A	Nails were inserted at locations that became gaps because of trees and clutter.	1/17/2005	RVW / das
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	No nails in grid	N/A	Nails were inserted at locations that became gaps because of trees and clutter.	1/17/2005	RVW / das
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Data gap explained by tree at 6, 90. Gap is 5' x 5'		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	2.49 1.89 1.2 3.81	Y Y Y Y		1/14/2005 1/14/2005 1/14/2005 1/14/2005	MAV MAV MAV MAV

NOTE: Much of Grid M 18 was covered by personal items of the adjacent landowner – steel frame for firewood, metal trailer, steel drums, which saturated the EM 61 response. For this reason the northeast portion of the grid was not surveyed with DGM. When the measuring crew arrived to check data gaps much of the clutter had been removed and the gap measurements were not complete. The unsurveyed portion of the grid and the gaps were cleared with mag/dig during the scheduled clearance of non-DGM surveyed areas (all gaps and large areas such as the stream bed in 35 P3 and 35P4) at the close of field operations SUM anomalies 8 and 4 have been labeled georocks on the dig sheet. There are supporting Chi picks there, and SUM profiles do not look like rock response. These will be re-investigated.

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: M18
Prepared By: MAV RVW
Date: 01/17/05

Number of lines	14
5% of lines	0.7

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
12	9:42:20	0:00:11	34	3.09	2.11
	9:42:31				

average velocity (mph)	2.11

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: M18
Prepared By: MAV RVW
Date: 01/17/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	8	95						0.00
2	16	97						0.00
3	25	99						0.00
4								0.00
5								0.00

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: M18
Prepared By: MAV RVW
Date: 01/17/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-2.42	3.13	0.51	0.58	0.30	0.83	0.51	1.13	233	5	2.49
Channel 2	-0.63	2.86	0.58	0.54	0.43	0.63	0.37	0.99	233	5	1.89
Channel 3	-0.57	1.48	0.36	0.37	0.22	0.40	0.30	0.98	233	5	1.20
Sum Channel	-1.10	5.34	1.46	1.32	0.85	1.27	0.93	2.29	233	5	3.81

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: M18
Prepared By: MAV RVW
Date: 01/17/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: M22
Prepared By: RVW
Date: 01/11/05

Item #	Defineable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.74	Y		1/11/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y	See Attached Figure	1/11/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	# 1 0.19 m from known location, # 2 0.21 m from known location, # 3 no data collected over this nail.	Y		1/11/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	There is an anomaly on line 39, 3 ft from where QC Nail 3 was buried.	Y	Not a nail. Anomaly across too many lines for a nail - das	1/11/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		NM	Gaps meaured to center of pit gaps; all gaps swept; minor gaps do not conceal tgts		das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV	2.28	Y	Not used for target selection	1/11/2005	RVW
				Ch 2 ≤ 2.75 mV	1.74	Y	Not used for target selection	1/11/2005	RVW
				Ch 3 ≤ 1.75 mV	1.29	Y	Not used for target selection	1/11/2005	RVW
				Sum of Channels 1,2,3 ≤8.00 mV	3.48	Y	Not used for target selection	1/11/2005	RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: M22
Prepared By: RVW
Date: 01/11/05

Number of lines	42
5% of lines	2.1

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
30	14:16:04	0:00:28	100	3.56	2.43
	14:16:32				
36	14:22:32	0:00:21	89	4.18	2.85
	14:22:53				
91.5	14:51:22	0:00:23	100	4.31	2.94
	14:51:45				

average velocity (mph)	2.74

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: M22
Prepared By: RVW
Date: 01/11/05

Nail Locations (origin SW corner)

x(UTM m) 421515.19
y(UTM m) 3863232.16

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	27	25	421523.42	3863239.77	Peak of 21 mV on line 27, not picked as target	421523.42	3863239.96	0.19
2	31	55	421524.64	3863248.91	64	421524.79	3863248.76	0.21
3	42	25	421527.99	3863239.77	No data collected over			3886168.73

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: M22
Prepared By: RVW
Date: 01/11/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-2.07	3.42	0.53	0.56	0.50	0.76	0.38	1.11	1341	6	2.28
Channel 2	-2.41	2.47	0.39	0.44	0.29	0.58	0.31	0.88	1341	6	1.74
Channel 3	-1.89	1.53	0.26	0.32	0.14	0.43	0.23	0.62	1341	6	1.29
Sum Chan	-3.93	4.83	0.88	1.00	0.91	1.16	0.71	1.72	1341	6	3.48

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: M22
Prepared By: RVW
Date: 01/11/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: N11
Prepared By: RVW
Date: 01/12/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	1.89	Y		1/12/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See Attached Figure	1/12/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	No data collected over nail	NA	Partial Grid	1/13/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	No data collected over nail	NA	Partial Grid	1/13/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		NM	Small, partial grid. Entire grid swept because of large cultural anomalies.		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤3.50 mV Ch 2 ≤2.75 mV Ch 3 ≤1.75 mV Sum of Channels 1,2,3 ≤8.00 mV	3.39 1.65 1.08 4.32	Y Y Y Y		1/13/2005 1/13/2005 1/13/2005 1/13/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: N11
Prepared By: RVW
Date: 01/12/05

Number of lines	13
5% of lines	0.65

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
90	8:06:02	0:00:12	36	3.00	2.05
	8:06:14				
96	7:56:22	0:00:13	33	2.54	1.73
	7:56:35				

average velocity (mph)	1.89

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: N11
Prepared By: RVW
Date: 01/12/05

Nail Locations (origin SW corner)

x(UTM m) 421301.94
y(UTM m) 3863354.09

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	1	1	421180.35	3863263.03	No data collected over nail			3886154.16
2								0.00
3								0.00
4								0.00
5								0.00

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: N11
Prepared By: RVW
Date: 01/12/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-0.14	5.41	1.33	1.11	0.58	1.13	0.75	3.04	83	2	3.39
Channel 2	-0.42	2.44	0.74	65.00	0.27	0.55	0.43	1.91	83	2	1.65
Channel 3	-0.18	1.64	0.56	0.58	0.71	0.36	0.29	1.52	83	2	1.08
Sum Channel	-0.87	4.92	1.31	1.06	0.40	1.44	1.16	4.71	83	2	4.32

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: N11
Prepared By: RVW
Date: 01/12/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: N12
Prepared By: RVW
Date: 01/17/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.37	Y		1/17/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Line 9 has errors	N/A	See attached Figure	1/17/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of ZapataEngineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	No nails in grid	N/A	Too cluttered and anomalous	1/17/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	No nails in grid	N/A		1/17/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		NM	Entire Grid Swept because of cultural clutter.		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV	4.98	N	Not used for target selection	1/17/2005	RVW
				Ch 2 ≤ 2.75 mV	3.03	N	Not used for target selection	1/17/2005	RVW
				Ch 3 ≤ 1.75 mV	1.5	Y		1/17/2005	RVW
				Sum of Channels 1,2,3 ≤ 8.00 mV	4.29	Y		1/17/2005	RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: N12
Prepared By: RVW
Date: 01/17/05

Number of lines	26
5% of lines	1.3

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
5	13:15:01	0:00:11	37.75	3.43	2.34
	13:15:12				
15	13:28:09	0:00:07	24.69	3.53	2.41
	13:28:16				

average velocity (mph)	2.37

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: N12
Prepared By: RVW
Date: 01/17/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1								0.00
2								0.00
3								0.00
4								0.00
5								0.00

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: N12
Prepared By: RVW
Date: 01/17/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-3.79	4.87	0.42	0.54	-0.09	1.66	0.62	1.25	146	15	4.98
Channel 2	-2.18	3.09	0.20	0.24	0.18	1.01	0.40	0.96	146	15	3.03
Channel 3	-1.06	1.71	0.12	0.15	0.18	0.50	0.23	0.39	146	15	1.50
Sum Channel	-0.44	5.27	1.40	1.11	0.33	1.43	0.81	1.36	146	15	4.29

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: N12
Prepared By: RVW
Date: 01/17/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: N13
Prepared By: RVW
Date: 01/18/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.04	Y		1/18/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y		1/18/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	No nails in grid	N/A		1/18/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	No nails in grid	N/A	Not attempted in very small partial grid with extensive clutter.	1/18/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		NM	Small gap, swept		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV	3.69	N	Not used for target selection	1/18/2005	RVW
				Ch 2 ≤ 2.75 mV	2.82	N	Not used for target selection	1/18/2005	RVW
				Ch 3 ≤ 1.75 mV	2.34	N	Not used for target selection	1/18/2005	RVW
				Sum of Channels 1,2,3 ≤ 8.00 mV	8.46	N	(1)	1/18/2005	RVW

(1) Chi tqts used

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: N13
Prepared By: RVW
Date: 01/18/05

Number of lines	37
5% of lines	1.85

Line		time	delta time	distance (ft)	velocity (ft/s)		velocity (mph)
	67.5	10:07:42	0:00:07	24.44		3.49	2.38
		10:07:50					
	87	9:32:03	0:00:14	35		2.50	1.71
		9:32:17					

average velocity (mph)	2.04

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: N13
Prepared By: RVW
Date: 01/18/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1								0.00
2								0.00
3								0.00
4								0.00
5								0.00

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: N13
Prepared By: RVW
Date: 01/18/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-0.19	5.78	1.90	1.80	1.61	1.23	1.04	3.20	249	10	3.69
Channel 2	-0.04	4.17	1.53	1.36	0.88	0.94	0.70	2.24	249	10	2.82
Channel 3	-0.04	3.62	1.40	1.41	0.61	0.78	0.50	1.64	249	10	2.34
Sum Channel	-13.28	7.27	-0.62	-0.44	-0.65	2.82	2.06	6.20	249	10	8.46

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: N13
Prepared By: RVW
Date: 01/18/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: N14
Prepared By: RVW
Date: 01/18/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	1.71	Y		1/18/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See attached figure	1/18/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	No nails in grid	N/A	No nails in partial grig with pit, clutter	1/18/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	No nails in grid	N/A		1/18/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations					
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV	4.44	N	Not used for target selection	1/18/2005	RVW
				Ch 2 ≤ 2.75 mV	3.12	N	Not used for target selection	1/18/2005	RVW
				Ch 3 ≤ 1.75 mV	1.74	Y		1/18/2005	RVW
				Sum of Channels 1,2,3 ≤ 8.00 mV	5.52	Y		1/18/2005	RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: N14
Prepared By: RVW
Date: 01/18/05

Number of lines	53
5% of lines	2.65

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
19.5	15:11:34	0:00:25	67	2.68	1.83
	15:11:59				
30	15:18:57	0:00:29	75	2.59	1.76
	15:19:26				
66	16:17:24	0:00:33	75	2.27	1.55
	16:17:57				

average velocity (mph)	1.71

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: N14
Prepared By: RVW
Date: 01/18/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1								0.00
2								0.00
3								0.00
4								0.00
5								0.00

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: N14
Prepared By: RVW
Date: 01/18/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-3.29	6.78	0.56	0.48	-0.04	1.48	0.76	2.98	340	14	4.44
Channel 2	-2.30	4.17	0.44	0.39	0.33	1.04	0.53	2.18	340	14	3.12
Channel 3	-1.15	2.94	0.29	0.30	0.08	0.58	0.31	1.25	340	14	1.74
Sum Channel	-13.81	5.54	0.96	1.10	0.30	1.84	1.23	4.32	340	14	5.52

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: N14
Prepared By: RVW
Date: 01/18/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: N15
Prepared By: RVW
Date: 01/18/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.13	Y		1/18/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See attached figure	1/18/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	No nails in grid	N/A	Partial grid, cluttered	1/18/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	No nails in grid	N/A	Partial grid, cluttered	1/18/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations			Gaps checked, all gaps to be swept		das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV	3	Y		1/18/2005	RVW
				Ch 2 ≤ 2.75 mV	2.01	Y		1/18/2005	RVW
				Ch 3 ≤ 1.75 mV	1.35	Y		1/18/2005	RVW
				Sum of Channels 1,2,3 ≤ 8.00 mV	4.53	Y		1/18/2005	RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: N15
Prepared By: RVW
Date: 01/18/05

Number of lines		67				
5% of lines		3.35				
Line		time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
	24	11:03:46	0:00:32	100	3.13	2.13
		11:04:18				
	36	11:33:22	0:00:28	97	3.46	2.36
		11:33:50				
	48	11:44:06	0:00:48	100	2.08	1.42
		11:44:55				
	96	12:37:04	0:00:26	100	3.85	2.62
		12:37:30				
					average velocity (mph)	2.13

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: N15
Prepared By: RVW
Date: 01/18/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1								0.00
2								0.00
3								0.00
4								0.00
5								0.00

ND=non-detect

FINAL
SITE SPECIFIC FINAL REPORT
VOLUME IV

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
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US Army Corps of Engineers, Charleston District

Prepared By:

ZAPATA ENGINEERING
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APRIL 2006

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DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: N15
Prepared By: RVW
Date: 01/18/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-4.53	4.63	0.59	0.65	-0.02	1.00	0.73	2.62	1082	6	3.00
Channel 2	-2.92	2.74	0.41	0.38	0.38	0.67	0.54	1.87	1082	6	2.01
Channel 3	-2.03	2.71	0.31	0.34	0.19	0.45	0.34	1.20	1082	6	1.35
Sum Channel	-2.66	8.97	1.34	1.46	0.85	1.51	1.14	3.90	1082	6	4.53

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: N15
Prepared By: RVW
Date: 01/18/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: N16
Prepared By: RVW
Date: 01/15/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.47	Y		1/15/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See attached Figure	1/15/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	# 1 offset = 0.46m; # 2 offset = 0.34m; # 3 offset = 0.15m	Y		1/15/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	# 4 seen 0.55m away, # 5 seen 0.81m away, # 6 seen 0.76m away	Y	Overall, acceptable. Some nails closer than interpreted by RVW, one lost in large anomaly.	1/15/2005	RVW, das
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		NA	No gaps		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV	4.35	N	Not used for target Selection	1/15/2005	RVW
				Ch 2 ≤ 2.75 mV	3.45	N	Not used for target Selection	1/15/2005	RVW
				Ch 3 ≤ 1.75 mV	2.25	N	Not used for target Selection	1/15/2005	RVW
				Sum of Channels 1,2,3 ≤ 8.00 mV	6.42	Y		1/15/2005	RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: N16
Prepared By: RVW
Date: 01/15/05

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
12	10:07:21	0:00:25	100	4.00	2.73
	10:07:46				
45	10:46:51	0:00:24	100	4.17	2.84
	10:47:15				
51	10:51:41	0:00:38	100	2.63	1.79
	10:52:19				
81	11:19:14	0:00:27	100	3.70	2.53
	11:19:41				
				average velocity (mph)	2.47

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: N16
Prepared By: RVW
Date: 01/15/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	12	6	421336.04	3863264.49	74	421336.04	3863264.03	0.46
2	24	25	421339.70	3863270.22	86	421339.85	3863269.92	0.34
3	97	0	421361.94	3863262.67	73	421361.79	3863262.67	0.15
4	100.8	25	421363.10	3863270.21	61	421362.55	3863270.21	0.55
5	101.6	60	421363.35	3863280.77	105	421362.55	3863280.62	0.81
6	102.5	75	421363.62	3863285.3	179	421362.86	3863285.3	0.76

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: N16
Prepared By: RVW
Date: 01/15/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-6.90	5.72	0.60	0.72	0.33	1.45	0.76	2.94	1873	38	4.35
Channel 2	-6.57	2.75	0.01	0.22	0.13	1.15	0.59	2.30	1873	38	3.45
Channel 3	-4.83	1.74	-0.04	0.09	-0.11	0.75	0.39	1.52	1873	38	2.25
Sum Channel	-12.61	4.90	0.05	0.52	-0.02	2.14	1.22	4.59	1879	38	6.42

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: N16
Prepared By: RVW
Date: 01/15/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: N17
Prepared By: RVW
Date: 01/15/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.32	Y		1/15/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See attached figure	1/15/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	# 1 offset = 0.06m; # 2 offset = 0.29m; # 3 offset = 0.11m; # 4 not detected; # 5 offset = 0.67m	Y	Acceptable overall	1/15/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	# 1 not seen on line 9, # 2 not seen on line 10.5, # 3 not seen on lines 6 & 10.5, # 5 not seen on lines 13.5 & 18.	Y		1/15/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		NA	No gaps		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	2.25 1.59 1.08 3.21	Y Y Y Y		1/15/2005	RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: N17
Prepared By: RVW
Date: 01/15/05

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
4.5	13:51:34	0:00:33	100	3.03	2.07
	13:52:07				
15	13:58:15	0:00:27	100	3.70	2.53
	13:58:43				
78	14:37:01	0:00:29	100	3.45	2.35
	14:37:29				
94.5	14:47:10	0:00:29	100	3.45	2.35
	14:47:39				
				average velocity (mph)	2.32

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: N17
Prepared By: RVW
Date: 01/15/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	6.8	3.3	421364.92	3863263.68	47	421364.91	3863263.74	0.06
2	7.6	6.6	421365.17	3863264.69	58	421365.29	3863264.95	0.29
3	8.5	9.8	421365.44	3863265.67	69	421365.44	3863265.56	0.11
4	6	0	421364.68	3863262.67	Not Detected			
5	15	75	421367.43	3863285.66	61	421367.73	3863285.06	0.67

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: N17
Prepared By: RVW
Date: 01/15/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-2.58	4.06	0.49	0.47	0.26	0.75	0.47	2.11	3326	20	2.25
Channel 2	-2.08	3.06	0.36	0.39	0.12	0.53	0.37	1.79	3326	20	1.59
Channel 3	-1.18	1.91	0.25	0.24	0.01	0.36	0.28	1.35	3326	20	1.08
Sum Channel	-4.62	4.96	0.47	0.37	0.07	1.07	0.78	3.59	3326	20	3.21

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: N17
Prepared By: RVW
Date: 01/15/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: N18
Prepared By: RVW
Date: 01/17/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.66	Y		1/17/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y		1/17/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of ZapataEngineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	# 1 offset = 0.15m; # 3 offset = 0.05m	Y		1/17/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	# 1 not seen on lines 7.5 & 12. # 2 not seen on 18, & 22.5. # 3 not seen on 19.5 & 24. # 4 not seen on 18 & 22.5. # 5 not seen on 43.5.	Y		1/17/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations			GAP 21, 5 checks		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	2.19 1.5 0.99 3.3	Y Y Y Y		1/17/2005 1/17/2005 1/17/2005 1/17/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: N18
Prepared By: RVW
Date: 01/17/05

Number of lines	34
5% of lines	1.7

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
3	15:02:00	0:00:29	100	3.45	2.35
	15:02:29				
42	15:34:26	0:00:23	100	4.35	2.97
	15:34:49				

average velocity (mph)	2.66

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: N18
Prepared By: RVW
Date: 01/17/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	9	25	421396.07	3863270.29	19	421396.22	3863270.28	0.15
2	21	5	421399.72	3863264.19	Located within a data gap			
3	21	8.3	421399.72	3863265.20	14	421399.72	3863265.25	0.05
4	21	4	421399.72	3863263.88	Located within a data gap			
5	45	2.5	421407.04	3863263.43	Located within a data gap			
6	48	90	421407.97	3863290.22	Data not collected over			

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: N18
Prepared By: RVW
Date: 01/17/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-6.99	2.82	0.53	0.57	0.27	0.73	0.43	1.51	1339	0	2.19
Channel 2	-4.70	2.43	0.39	0.50	0.28	0.50	0.33	1.06	1339	0	1.50
Channel 3	-2.38	1.69	0.27	0.33	0.20	0.33	0.22	0.74	1339	0	0.99
Sum Channel	-1.95	4.84	1.21	1.16	1.66	1.10	0.68	2.38	1339	0	3.30

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: N18
Prepared By: RVW
Date: 01/17/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: N21
Prepared By: RVW
Date: 01/18/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	1.8	Y		1/18/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See attached figure	1/18/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of ZapataEngineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	No nails in grid	N/A		1/18/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	No nails in grid	N/A	Partial grid	1/18/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Checked 98, 13; 75, 94		75, 94
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	1.89 1.38 1.05 3.63	Y Y Y Y		1/18/2005 1/18/2005 1/18/2005 1/18/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: N21
Prepared By: RVW
Date: 01/18/05

Number of lines	44
5% of lines	2.2

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
60	9:50:43	0:00:23	50	2.17	1.48
	9:51:06				
84	9:22:33	0:00:38	100	2.63	1.79
	9:23:10				
93	9:13:18	0:00:32	99.69	3.12	2.12
	9:13:51				

average velocity (mph)	1.80

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: N21
Prepared By: RVW
Date: 01/18/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1								0.00
2								0.00
3								0.00
4								0.00
5								0.00

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: N21
Prepared By: RVW
Date: 01/18/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.92	3.07	0.48	0.57	0.31	0.63	0.43	1.48	685	2	1.89
Channel 2	-2.12	1.79	0.32	0.33	0.12	0.46	0.32	1.20	685	2	1.38
Channel 3	-1.29	1.65	0.29	0.30	0.27	0.35	0.23	0.85	685	2	1.05
Sum Channel	-4.09	4.97	1.07	1.01	0.91	1.21	0.85	3.15	685	2	3.63

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: N21
Prepared By: RVW
Date: 01/18/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: N22
Prepared By: RVW
Date: 01/13/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.65	Y		1/13/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See Attached Figure	1/13/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of ZapataEngineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	# 1 offset = 0.31m; # 2 offset = 0.01m; # 3 offset = 0.15m.	Y		1/13/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	# 1 not seen on lines 28.5 or 33. # 2 not seen on lines 28.5 or 33. # 3 not seen on lines 21 or 27.	Y		1/13/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Gaps 14, 0; 27, 0 checked.		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	2.73 1.95 1.47 3.69	Y Y Y Y		1/13/2005 1/13/2005 1/13/2005 1/13/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: N22
Prepared By: RVW
Date: 01/13/05

Number of lines	46
5% of lines	2.3

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
18	13:55:34	0:00:32	100	3.13	2.13
	13:56:06				
33	14:20:18	0:00:24	100	4.17	2.84
	14:20:41				
93	14:49:23	0:00:23	100	4.35	2.97
	14:49:46				

average velocity (mph)	2.65

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: N22
Prepared By: RVW
Date: 01/13/05

Nail Locations (origin SW corner)

x(UTM m) 421301.94
y(UTM m) 3863354.09

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	31	15	421524.65	3863267.20	26	421524.34	3863267.2	0.31
2	31	27	421524.65	3863270.86	37	421524.65	3863270.85	0.01
3	24	49	421522.52	3863277.56	29	421522.52	3863277.71	0.15

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: N22
Prepared By: RVW
Date: 01/13/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-2.20	3.86	0.73	0.71	0.14	0.91	0.39	1.08	2809	12	2.73
Channel 2	-2.00	2.84	0.50	0.52	0.27	0.65	0.30	0.89	2809	12	1.95
Channel 3	-2.07	2.31	0.35	0.40	0.26	0.49	0.24	0.68	2809	12	1.47
Sum Channel	-6.66	5.27	0.82	0.80	0.43	1.23	0.72	1.91	2809	12	3.69

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: N22
Prepared By: RVW
Date: 01/13/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: P11
Prepared By: D. Wolf
Date: 12/09/04

Item #	Defineable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	≤3 mph**	2.43 mph	Y		12/9/2004	DSW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y	See Attached Figure. Slight data gap positioning differences along line observed.	12/9/2004	DSW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of ZapataEngineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	NA	NA	No Nails Installed. Data set includes Grid N-11. Small, partial grid.	12/9/2004	DSW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	TRUE	Y	See Field Notes	12/9/2004	DSW
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	NA	Y	No Nails Installed. Data set includes Grid N-11.	12/9/2004	DSW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations	NA	NA	No data gaps	12/9/2004	DSW / das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤3.39 mV	2.055	Y		12/9/2004	DSW / AJP
				Ch 2 ≤2.72 mV	1.5	Y		12/9/2004	DSW / AJP
				Ch 3 ≤1.73 mV	1.11	Y		12/9/2004	DSW / AJP
				Sum of Channels 1,2,3 ≤6.53 mV	3.45	Y		12/9/2004	DSW / AJP

NA - Not Analzed see comment
** Metric updated from 2 mph to 3 mph. GPO speed tests demonstrate key seed items were detected at a speed of 3 mph
*Background noise in this grid is greater than the GPO.

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Daily Field QC Procedures)

Site: Former Camp Croft, SC
Grid: P11
Prepared By: D. Wolf
Date: 12/09/04

	Date Collected	Time	Metric	Pass (Y or N)	Comments
Static/Standard Test	11/26/2004	AM	within 3 STD		
			Channel 1	Y	5 points outside range
			Channel 2	Y	4 points outside range
			Channel 3	Y	6 points outside range
Static/Standard Test	11/26/2004	PM	within 3 STD		
			Channel 1	Y	0 points outside range
			Channel 2	Y	0 points outside range
			Channel 3	Y	0 points outside range
Repeat Line Test Conducted	11/26/2004			Y	Y

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: P11
Prepared By: D. Wolf
Date: 12/09/04

Number of lines	12
5% of lines	0.6

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
87	8:10:47	0:00:28	100	3.571428571	2.435714286
	8:11:15				
				average velocity (mph)	2.435714286

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: P11
Prepared By: D. Wolf
Date: 12/09/04

NO NAILS INSTALLED

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: P11
Prepared By: D. Wolf
Date: 12/09/04

Camp Croft Background Response Statistics and Noise Estimates

Grid P11

Polygon 1

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-0.42	3.04	1.03	0.95	1.02	0.61	0.35	1.40	168.00	0.00	1.83
Channel 2	-0.42	2.21	0.73	0.73	0.48	0.49	0.27	1.05	168.00	0.00	1.47
Channel 3	-0.20	1.89	0.61	0.62	0.73	0.38	0.19	0.84	168.00	0.00	1.14
Sum Chan	-0.56	4.34	1.03	0.87	0.82	1.01	0.59	2.18	168.00	0.00	3.03

Polygon 2

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-0.14	2.98	1.18	1.09	0.67	0.76	0.46	1.79	97.00	0.00	2.28
Channel 2	-0.08	2.49	0.82	0.78	0.65	0.51	0.34	1.63	97.00	0.00	1.53
Channel 3	-0.01	1.64	0.69	0.68	0.83	0.36	0.26	1.31	97.00	0.00	1.08
Sum Chan	-0.60	4.97	1.50	1.37	0.73	1.29	0.88	3.90	97.00	0.00	3.87

Average of Two Polygon Areas Background Noise Metric

Channel	*Noise Estimate*		Polgon 1	Polgon 2	Average
Channel 1	2.06	Mean of Sum	1.03	1.50	1.27
Channel 2	1.50	Std. dev. Of Sum	1.01	1.29	1.15
Channel 3	1.11				
Sum Chan	3.45				

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: P11
Prepared By: D. Wolf
Date: 12/09/04

Number of obstructed (effected) lines	29
20% of effected lines	5.8

Line

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: P12
Prepared By: RVW
Date: 01/18/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.67	Y		1/18/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	N	Error on line 51, See attached figure. Minor fid prob edge of grid, cultural anomaly	1/18/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	No nails in grid	N/A		1/18/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	No nails in grid	N/A		1/18/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		NA	No gaps within grid		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	3.06 2.04 1.38 3.36	Y Y Y Y		1/18/2005 1/18/2005 1/18/2005 1/18/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: P12
Prepared By: RVW
Date: 01/18/05

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
7.5	13:17:16	0:00:24	99.9	4.16	2.84
	13:17:40				
43.5	13:50:20	0:00:25	100	4.00	2.73
	13:50:45				
73.5	14:14:29	0:00:20	73	3.65	2.49
	14:14:49				
30	13:42:18	0:00:26	100	3.85	2.62
	13:42:44				
				average velocity (mph)	2.67

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: P12
Prepared By: RVW
Date: 01/18/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1								0.00
2								0.00
3								0.00
4								0.00
5								0.00

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: P12
Prepared By: RVW
Date: 01/18/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-4.24	4.49	0.72	0.67	0.22	1.02	0.64	2.44	2113	28	3.06
Channel 2	-2.29	3.29	0.49	0.50	0.44	0.68	0.42	1.65	2113	28	2.04
Channel 3	-1.57	2.45	0.35	0.36	0.15	0.46	0.29	1.10	2113	28	1.38
Sum Channel	-1.25	5.44	0.98	0.84	0.21	1.12	0.82	2.92	2113	28	3.36

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: P12
Prepared By: RVW
Date: 01/18/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: P13
Prepared By: RVW
Date: 01/17/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.3	Y		1/13/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See Attached Figure	1/13/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of ZapataEngineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	# 1 offset = 0.15m, # 2 offset = 0.20	Y		1/17/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of ZapataEngineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	All nails surronded by other anomalies	N/A		1/17/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		NM	mag/dig sweep		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV	3.6	N	Not used for target selection	1/13/2005	RVW
				Ch 2 ≤ 2.75 mV	2.91	N	Not used for target selection	1/13/2005	RVW
				Ch 3 ≤ 1.75 mV	2.25	N	Not used for target selection	1/13/2005	RVW
				Sum of Channels 1,2,3 ≤ 8.00 mV	8.01	N		1/13/2005	RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: P13
Prepared By: RVW
Date: 01/17/05

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
23	11:17:40	0:00:24	88	3.67	2.50
	11:18:04				
48	11:48:17	0:00:27	100	3.70	2.53
	11:48:44				
86	9:34:24	0:00:32	100	3.13	2.13
	9:34:56				
95	9:16:25	0:00:25	75	3.00	2.05
	9:16:50				
				average velocity (mph)	2.30

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: P13
Prepared By: RVW
Date: 01/17/05

Nail Locations (origin SW corner)

x(UTM m) 421240.98
y(UTM m) 3863293.18

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	6	80	421242.82	3863317.55	5	421242.82	3863317.7	0.15
2	25	45	421248.60	3863306.88	Outside P 13 (40 P)grid	421248.7983	3863306.83	0.20
3	66	45	421261.09	3863306.88	Outside P 13 (40 P)grid			

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: P13
Prepared By: RVW
Date: 01/17/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: P13
Prepared By: RVW
Date: 01/17/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-0.34	5.52	1.78	1.61	1.19	1.20	0.88	3.25	580	8	3.60
Channel 2	-8.00	4.42	1.48	1.27	1.21	0.97	0.70	2.81	580	8	2.91
Channel 3	-0.04	3.85	1.23	1.17	1.05	0.75	0.42	1.69	580	8	2.25
Sum Channel	-13.41	5.98	-1.03	-0.48	-0.08	2.67	1.90	7.31	580	8	8.01

DGM Quality Control Procedures, Tests and Metric Summar

Site: Former Camp Croft, SC
Grid: P14
Prepared By: RVW
Date: 01/18/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.36	Y		1/18/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See attached figure	1/18/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of ZapataEngineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	No nails in grid	N/A		1/18/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of ZapataEngineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	No nails in grid	N/A		1/18/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations			Gaps 7, 12; 20, 65 are as shown; extensive woodpiles		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV	4.11	N	Not used for target selection	1/18/2005	RVW
				Ch 2 ≤ 2.75 mV	2.7	Y	Not used for target selection	1/18/2005	RVW
				Ch 3 ≤ 1.75 mV	1.77	N	Not used for target selection	1/18/2005	RVW
				Sum of Channels 1,2,3 ≤ 8.00 mV	5.07	Y		1/18/2005	RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: P14
Prepared By: RVW
Date: 01/18/05

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
57	12:56:30	0:00:26	100	3.85	2.62
	12:56:56				
60	12:58:17	0:00:26	100	3.85	2.62
	12:58:44				
70.5	13:11:48	0:00:32	94	2.94	2.00
	13:12:20				
96	13:40:14	0:00:30	96	3.20	2.18
	13:40:43				
				average velocity (mph)	2.36

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: P14
Prepared By: RVW
Date: 01/18/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1								0.00
2								0.00
3								0.00
4								0.00
5								0.00

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: P14
Prepared By: RVW
Date: 01/18/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-5.45	5.21	-0.35	-0.12	-0.45	1.37	0.73	2.01	616	15	4.11
Channel 2	-3.21	3.24	-0.16	-0.12	-0.05	0.90	0.50	1.39	616	15	2.70
Channel 3	-1.96	1.88	-0.09	-0.04	0.24	0.59	0.33	0.90	616	15	1.77
Sum Channel	-4.25	10.33	0.49	0.31	-0.15	1.69	1.16	3.06	616	15	5.07

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: P14
Prepared By: RVW
Date: 01/18/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summar

Site: Former Camp Croft, SC
Grid: P15
Prepared By: D. Wolf
Date: 12/02/04

Item #	Defineable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	≤3 mph**	2.17 mph	Y		12/2/2004	DSW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y	See Attached Figure	12/2/2004	DSW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of ZapataEngineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	3 of 3 nails detected within 0.5 meter radius	Y	See attached Figure	12/2/2004	DSW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes	12/2/2004	DSW
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of ZapataEngineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	QC nails detected at their actual location	Y	See Attached Figure	12/2/2004	DSW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Gaps 14, 6; 20, 0.5 are as shown.	12/2/2004	DSW
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤3.39 mV Ch 2 ≤2.72 mV Ch 3 ≤1.73 mV Sum of Channels 1,2,3 ≤6.53 mV	3.26 2.44 1.61 6.77	Y Y Y N	 No Corrective Action Taken*	12/2/2004 12/2/2004 12/2/2004 12/2/2004	DSW DSW DSW DSW

NA - Not Analyzed see comment

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: P15
Prepared By: D. Wolf
Date: 12/02/04

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
56	13:33:29	0:00:35	100	2.857142857	1.948571429
	13:34:04				
66	13:55:34	0:00:30	100	3.333333333	2.273333333
	13:55:04				
86	14:29:00	0:00:30	100	3.333333333	2.273333333
	14:29:30				
95	14:42:17	0:00:31	100	3.225806452	2.2
	14:42:48				
				average velocity (mph)	2.173809524

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: P15
Prepared By: D. Wolf
Date: 12/02/04

Nail Locations (origin SW corner)

x(UTM m)		421301.92						
y(UTM m)		3863293.16						
		In-situ nail locations						
nail_ID		x (ft)	y (ft)	x (m)	y(m)	x (utm m)	y(utm m)	Distance from target to nail (m)
	1	70	50	21.336	15.24	421323.26	3863308.40	0
	2	30	15	9.144	4.572	421311.06	3863297.73	0.4
	3	60	30	18.288	9.144	421320.21	3863302.30	0.3

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: P15
Prepared By: D. Wolf
Date: 12/02/04

Camp Croft Background Response Statistics and Noise Estimates

Grids P15_R15

Polygon 1

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-3.69	3.31	0.28	0.25	-0.11	1.03	0.50	1.37	777.00	0.00	3.09
Channel 2	-4.02	2.46	0.19	0.30	0.09	0.80	0.39	1.19	777.00	0.00	2.40
Channel 3	-1.63	2.38	0.19	0.21	0.08	0.53	0.25	0.78	777.00	0.00	1.59
Sum Channel	-9.00	6.37	0.66	0.93	0.77	2.15	1.01	2.96	777.00	0.00	6.45

Polygon 2

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-3.82	4.74	0.41	0.46	0.55	1.19	0.47	0.89	552.00	0.00	3.57
Channel 2	-1.96	2.77	0.28	0.31	-0.04	0.86	0.35	0.76	552.00	0.00	2.58
Channel 3	-1.09	1.90	0.29	0.28	0.12	0.54	0.22	0.52	552.00	0.00	1.62
Sum Channel	-5.08	9.01	0.98	1.09	0.35	2.45	0.94	1.74	552.00	0.00	7.35

Polygon 3

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-2.87	6.60	0.47	0.49	-0.01	1.04	0.50	0.95	840.00	18.00	3.12
Channel 2	-1.89	2.93	0.36	0.42	0.07	0.78	0.34	0.80	840.00	18.00	2.34
Channel 3	-1.61	1.89	0.26	0.28	0.32	0.54	0.24	0.58	840.00	18.00	1.62
Sum Channel	-5.86	8.78	1.09	1.16	1.01	2.17	0.92	1.84	840.00	18.00	6.51

Average of Three Polygon Areas

Channel	*Noise Estimate*
Channel 1	3.26
Channel 2	2.44
Channel 3	1.61
Sum Channel	6.77

Background Noise Metric

	Polgon 1	Polgon 2	Polgon 3	Average
Mean of Sum	0.66	0.98	1.09	0.91
Std. dev. Of Sum	2.15	2.45	2.17	2.26

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: P15
Prepared By: D. Wolf
Date: 12/02/04

Number of obstructed (effected) lines	29
20% of effected lines	5.8

Line

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: P16
Prepared By: D. Wolf
Date: 12/09/04

Item #	Defineable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	≤3 mph**	2.77 mph	Y		12/9/2004	DSW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y	See Attached Figure. Slight data gap positioning differences along line observed.	12/9/2004	DSW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	all < 0.3 m	Y	4 of 4 detected	12/9/2004	DSW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	TRUE	Y	See Field Notes	12/9/2004	DSW
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	4 of 4 detected	Y		12/9/2004	DSW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	No gaps except for that caused by a large ditch in the SE corner	12/9/2004	DSW
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤3.39 mV Ch 2 ≤2.72 mV Ch 3 ≤1.73 mV Sum of Channels 1,2,3 ≤6.53 mV	1.9 1.58 1.17 3.94	Y Y Y Y		12/9/2004 12/9/2004 12/9/2004 12/9/2004	DSW DSW DSW DSW

NA - Not Analyzed see comment

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: P16
Prepared By: D. Wolf
Date: 12/09/04

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
5	7:53:29	0:00:25	100	4	2.728
	7:53:54				
33	8:30:31	0:00:22	100	4.545454545	3.1
	8:30:53				
42	8:42:29	0:00:25	100	4	2.728
	8:42:54				
50	8:51:29	0:00:27	100	3.703703704	2.525925926
	8:51:56				

average velocity (mph)	2.77

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: P16
Prepared By: D. Wolf
Date: 12/09/04

Nail Locations (origin SW corner)

x(UTM m)	421332.40
y(UTM m)	3863293.00

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (m)	y(m)	x (utm m)	y(utm m)	Distance from target to nail (m)
1	18	0	5.4864	0	421337.89	3863293.00	0
2	18	25	5.4864	7.62	421337.89	3863300.62	0
3	18	50.8	5.4864	15.48384	421337.89	3863308.48	0.3
4	100	10	30.48	3.048	421362.88	3863296.05	0

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: P16
Prepared By: D. Wolf
Date: 12/09/04

Camp Croft Background Response Statistics and Noise Estimates

Grids P16_R16

Polygon 1

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-0.58	3.29	0.56	0.47	0.02	0.60	0.30	1.11	1160.00	0.00	1.80
Channel 2	-0.77	3.06	0.36	0.35	0.31	0.44	0.28	1.09	1160.00	0.00	1.32
Channel 3	-0.52	1.54	0.28	0.21	0.19	0.32	0.20	0.84	1160.00	0.00	0.96
Sum Channel	-1.41	6.66	1.23	1.11	0.86	1.21	0.63	2.26	1160.00	0.00	3.63

Polygon 2

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-0.69	3.49	0.57	0.53	0.40	0.64	0.44	1.62	228.00	0.00	1.92
Channel 2	-0.85	2.77	0.32	0.28	0.02	0.57	0.42	1.69	228.00	0.00	1.71
Channel 3	-0.39	2.23	0.31	0.21	0.13	0.42	0.30	1.15	228.00	0.00	1.26
Sum Channel	-1.57	5.99	1.08	0.95	1.19	1.25	1.03	3.78	226.00	2.00	3.75

Polygon 3

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.54	2.86	0.57	0.47	0.34	0.66	0.42	1.31	309.00	0.00	1.98
Channel 2	-3.40	1.68	0.40	0.41	0.20	0.57	0.41	1.21	309.00	0.00	1.71
Channel 3	-2.42	1.95	0.29	0.31	0.45	0.43	0.35	1.21	309.00	0.00	1.29
Sum Channel	-7.36	5.26	1.25	1.32	1.19	1.48	1.04	3.01	309.00	0.00	4.44

Average of Three Polygon Areas

Channel	*Noise Estimate*
Channel 1	1.90
Channel 2	1.58
Channel 3	1.17
Sum Channel	3.94

Background Noise Metric

	Polgon 1	Polgon 2	Polgon 3	Average
Mean of Sum	1.23	1.08	1.25	1.19
Std. dev. Of Sum	1.21	1.25	1.48	1.31

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: P16
Prepared By: D. Wolf
Date: 12/09/04

Number of obstructed (effected) lines	29
20% of effected lines	5.8

Line

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: P17
Prepared By: RVW
Date: 01/13/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.38	Y		1/13/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See Attached Figure	1/13/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	# 1 offset = 0.29; # 2 offset = 0.51; # 3 offset = 0.29	Y		1/13/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	Other anomalies around # 1. # 2 not seen on lines 22.5 or 28.5. #3 not seen on lines 22.5 or 27.	Y		1/13/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		NA	No gaps.		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	3.12 1.98 1.17 3.57	Y Y Y Y		1/13/2005 1/13/2005 1/13/2005 1/13/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: P17
Prepared By: RVW
Date: 01/13/05

Number of lines	56
5% of lines	2.8

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
3	8:34:36	0:00:28	100	3.57	2.44
	8:35:04				
28.5	8:59:13	0:00:34	100	2.94	2.01
	8:59:47				
48	9:27:43	0:00:19	75	3.95	2.69
	9:28:02				

average velocity (mph)	2.38

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: P17
Prepared By: RVW
Date: 01/13/05

Nail Locations (origin SW corner)

x(UTM m) 421301.94
y(UTM m) 3863354.09

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	24	50	421370.18	3863308.38	13	421370.24	3863308.66	0.29
2	24	60	421370.18	3863311.42	21	421370.69	3863311.46	0.51
3	24	75	421370.18	3863315.99	16	421370.37	3863316.2	0.28

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: P17
Prepared By: RVW
Date: 01/13/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-3.61	5.57	0.92	0.79	0.50	1.04	0.56	2.04	2247	3	3.12
Channel 2	-0.87	5.05	0.57	0.49	0.18	0.66	0.35	1.38	2247	3	1.98
Channel 3	-0.49	2.40	0.34	0.29	0.02	0.39	0.22	0.91	2247	3	1.17
Sum Channel	-4.31	5.50	1.08	1.00	0.08	1.19	0.82	3.03	2247	3	3.57

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: P17
Prepared By: RVW
Date: 01/13/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: P21
Prepared By: RVW
Date: 01/18/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.24	Y		1/18/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See attached Figure	1/18/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	No nails in grid	N/A	Small partial grid.	1/18/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	No nails in grid	N/A	Small partial grid.	1/18/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Trees at 56, 30 and 100, 29 explain gaps.		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	1.83 1.26 0.99 3.51	Y Y Y Y		1/18/2005 1/18/2005 1/18/2005 1/18/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: P21
Prepared By: RVW
Date: 01/18/05

Number of lines	52
5% of lines	2.6

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
25.5	10:15:48	0:00:10	34	3.40	2.32
	10:15:58				
60	9:51:06	0:00:16	50	3.13	2.13
	9:51:22				
93	9:13:51	0:00:15	49.69	3.31	2.26
	9:14:06				

average velocity (mph)	2.24

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: P21
Prepared By: RVW
Date: 01/18/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1								0.00
2								0.00
3								0.00
4								0.00
5								0.00

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: P21
Prepared By: RVW
Date: 01/18/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.50	2.87	0.59	0.60	0.55	0.61	0.35	1.08	1974	26	1.83
Channel 2	-1.31	1.98	0.43	0.47	0.30	0.42	0.27	0.83	1974	26	1.26
Channel 3	-0.89	1.70	0.33	0.30	0.11	0.33	0.20	0.61	1974	26	0.99
Sum Channel	-3.15	4.75	1.34	1.29	1.21	1.17	0.71	2.17	1974	26	3.51

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: P21
Prepared By: RVW
Date: 01/18/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: P22
Prepared By: RVW
Date: 01/18/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.78	Y		1/18/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See attached figure	1/18/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	No nails in grid	N/A	Small partial grid	1/18/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	No nails in grid	N/A	Small partial grid	1/18/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	tree at 9,6 explains gap		das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	2.67 1.83 1.29 3.06	Y Y Y Y		1/18/2005 1/18/2005 1/18/2005 1/18/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: P22
Prepared By: RVW
Date: 01/18/05

Number of lines	13
5% of lines	0.65

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
4.5	13:08:51	0:00:09	36	4.00	2.73
	13:09:00				
16.5	13:49:27	0:00:06	25	4.17	2.84
	13:49:33				

average velocity (mph)	2.78

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: P22
Prepared By: RVW
Date: 01/18/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1								0.00
2								0.00
3								0.00
4								0.00
5								0.00

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: P22
Prepared By: RVW
Date: 01/18/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.11	4.64	0.74	0.69	0.27	0.89	0.35	0.97	364	15	2.67
Channel 2	-1.08	1.91	0.52	0.54	0.32	0.61	0.24	0.78	364	15	1.83
Channel 3	-0.91	1.27	0.31	0.32	0.34	0.43	0.16	0.50	364	15	1.29
Sum Channel	-2.60	4.81	0.92	0.80	0.26	1.02	0.58	1.62	364	15	3.06

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: P22
Prepared By: RVW
Date: 01/18/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: R11
Prepared By: RVW
Date: 01/17/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	3.04	N	Acceptable das	1/17/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y		1/17/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	# 1 offset = 0.25m; # 2 = 0.49m; # 4 = 0.01m; # 5 = 0.22m; # 6 = 0.34m	Y		1/17/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	# 1 not seen on line 2; # 3 not seen on 2; # 4 not seen on 71 & 75; # 5 not seen on 54; # 6 not seen on 42 & 48.	Y		1/17/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Small tree gap at 42, 15		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	2.25 1.44 1.11 3.3	Y Y Y Y		1/17/2005 1/17/2005 1/17/2005 1/17/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: R11
Prepared By: RVW
Date: 01/17/05

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
9	10:47:07	0:00:22	100	4.55	3.10
	10:47:29				
38	11:10:21	0:00:24	100	4.17	2.84
	11:10:45				
47	11:17:15	0:00:23	100	4.35	2.97
	11:17:38				
84	11:42:05	0:00:21	100	4.76	3.25
	11:42:26				

average velocity (mph)	3.04

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: R11
Prepared By: RVW
Date: 01/17/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	-0.8	35	421179.81	3863334.32	22	421180.057	3863334.322	0.25
2	-1.6	29	421179.57	3863332.49	82	421180.056	3863332.494	0.49
3	-2.5	13	421179.29	3863327.62	Not Detected			
4	72	50	421202.00	3863338.89	11	421202.00	3863338.89	0.01
5	56	26	421197.12	3863331.58	12	421196.97	3863331.42	0.22
6	45	5	421193.77	3863325.18	14	421194.07	3863325.33	0.34

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: R11
Prepared By: RVW
Date: 01/17/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.12	4.10	0.79	0.73	0.67	0.75	0.40	1.19	4807	8	2.25
Channel 2	-0.96	2.27	0.52	0.52	0.29	0.48	0.25	0.76	4807	8	1.44
Channel 3	-0.91	5.58	0.35	0.31	0.24	0.37	0.18	0.54	4807	8	1.11
Sum Channel	-0.71	5.00	1.16	0.96	-0.05	1.10	0.67	2.05	4807	8	3.30

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: R11
Prepared By: RVW
Date: 01/17/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: R12
Prepared By: RVW
Date: 01/18/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.35	Y		1/18/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y		1/18/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.		Y			das
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails		Y			das
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		NA	No gaps		das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV	3.6	N	Not used for target selection	1/18/2005	RVW
				Ch 2 ≤ 2.75 mV	2.25	Y		1/18/2005	RVW
				Ch 3 ≤ 1.75 mV	1.35	Y		1/18/2005	RVW
				Sum of Channels 1,2,3 ≤ 8.00 mV	3.51	Y		1/18/2005	RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: R12
Prepared By: RVW
Date: 01/18/05

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
12	16:01:27	0:00:28	100	3.57	2.44
	16:01:55				
40.5	16:21:15	0:00:29	100	3.45	2.35
	16:21:44				
70.5	17:06:40	0:00:29	100	3.45	2.35
	17:07:10				
99	17:24:52	0:00:30	100	3.33	2.27
	17:25:22				

average velocity (mph)	2.35

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: R12
Prepared By: RVW
Date: 01/18/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	24	25			Sum 18			0.00
2	12	50			Sum 19			0.6 ft
3	1	55			Sum 17			0.50 ft
								0.00
								0.00

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: R12
Prepared By: RVW
Date: 01/18/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-5.56	4.95	0.67	0.79	0.24	1.20	0.60	2.06	3736	18	3.60
Channel 2	-2.81	2.99	0.48	0.45	0.51	0.75	0.36	1.35	3736	18	2.25
Channel 3	-1.42	1.80	0.28	0.26	0.23	0.45	0.23	0.87	3736	18	1.35
Sum Channel	-7.03	5.04	1.21	1.27	0.64	1.17	0.87	2.97	3736	18	3.51

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: R12
Prepared By: RVW
Date: 01/18/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: R13
Prepared By: RVW
Date: 01/13/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	3	Y		1/13/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y		1/13/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	# 1 offset = 0m; # 2 offset = 0.45m; # 3 offset = 0.22	Y		1/13/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	Other anomalies to the west of # 1, not seen on line 12. # 2 not seen on lines 4.5 and 9. # 3 not seen on line 97.5	Y		1/13/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		NA	No Gaps		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV	7.35	N	Not used for target seclection	1/13/2005	RVW
				Ch 2 ≤ 2.75 mV	4.8	N	Not used for target seclection	1/13/2005	RVW
				Ch 3 ≤ 1.75 mV	3	N	Not used for target seclection	1/13/2005	RVW
				Sum of Channels 1,2,3 ≤ 8.00 mV	9.57	N		1/13/2005	RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: R13
Prepared By: RVW
Date: 01/13/05

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
6	12:30:30	0:00:23	100	4.35	2.97
	12:30:53				
34.5	13:17:15	0:00:23	100	4.35	2.97
	13:17:38				
72	14:17:21	0:00:22	100	4.55	3.10
	14:17:43				
90	14:40:27	0:00:23	100	4.35	2.97
	14:40:50				
				average velocity (mph)	3.00

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: R13
Prepared By: RVW
Date: 01/13/05

Nail Locations (origin SW corner)

x(UTM m) 421240.99
y(UTM m) 3863323.64

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	10	53	421244.04	3863339.79	200	421244.04	3863339.79	0.00
2	6	78	421242.83	3863347.41	136	421243.28	3863347.41	0.45
3	99	74	421271.16	3863346.18	133	421271.32	3863346.03	0.22

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: R13
Prepared By: RVW
Date: 01/13/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-9.77	9.50	-0.21	-0.13	1.54	2.45	1.32	5.64	1288	0	7.35
Channel 2	-6.46	6.24	-0.12	-0.11	-0.51	1.60	0.85	3.68	1288	0	4.80
Channel 3	-4.47	4.49	-0.07	0.01	-0.08	1.00	0.54	2.38	1288	0	3.00
Sum Channel	-19.13	5.82	-1.31	-0.41	-0.15	3.19	1.99	8.13	1288	0	9.57

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: R13
Prepared By: RVW
Date: 01/13/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: R14
Prepared By: RVW
Date: 01/13/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.77	Y		1/13/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See Attached Figure	1/13/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	# 1 offset = 0.21m; # 2 offset = 0.48m; # 3 offset = 0.23m	Y		1/13/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	All nails were surronded by other anomalies	NA		1/13/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Checked minor gaps along fence		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV	4.68	N	Not used for target selection	1/13/2005	RVW
				Ch 2 ≤ 2.75 mV	3.03	N	Not used for target selection	1/13/2005	RVW
				Ch 3 ≤ 1.75 mV	1.77	N	Not used for target selection	1/13/2005	RVW
				Sum of Channels 1,2,3 ≤ 8.00 mV	5.13	Y		1/13/2005	RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: R14
Prepared By: RVW
Date: 01/13/05

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
15	14:08:18	0:00:22	100	4.55	3.10
	14:08:40				
31.5	14:27:42	0:00:26	100	3.85	2.62
	14:28:08				
78	16:05:29	0:00:24	100	4.17	2.84
	16:05:53				
99	16:33:46	0:00:27	100	3.70	2.53
	16:34:13				
				average velocity (mph)	2.77

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: R14
Prepared By: RVW
Date: 01/13/05

Nail Locations (origin SW corner)

x(UTM m) 421271.46
y(UTM m) 3863323.63

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	10	15	421274.51	3863328.20	52	421274.66	3863328.05	0.21
2	20	25	421277.56	3863331.25	Peak on line 21, not picked as target	421277.86	3863331.62	0.48
3	30	35	421280.60	3863334.29	34	421280.76	3863334.45	0.23

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: R14
Prepared By: RVW
Date: 01/13/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-3.87	9.71	1.07	0.94	0.66	1.56	0.85	3.70	872	10	4.68
Channel 2	-2.22	5.12	0.68	0.69	0.30	1.01	0.57	2.53	872	10	3.03
Channel 3	-1.90	2.89	0.40	0.39	0.34	0.59	0.34	1.48	872	10	1.77
Sum Channel	-6.94	8.04	1.08	0.86	0.70	1.71	1.20	4.33	872	10	5.13

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: R14
Prepared By: RVW
Date: 01/13/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: R15
Prepared By: RVW
Date: 01/19/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.1	Y		1/19/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See attached Figure	1/19/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	No nails in grid	N/A		1/19/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	No nails in grid	N/A		1/19/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	tree @ 62, 19; tree @ 92, 67		das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	3.12 2.4 1.56 6.48	Y Y Y Y		1/19/2005 1/19/2005 1/19/2005 1/19/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: R15
Prepared By: RVW
Date: 01/19/05

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
12	12:17:52	0:00:36	100	2.78	1.89
	12:18:28				
31.5	12:50:46	0:00:35	100	2.86	1.95
	12:51:21				
66	13:55:34	0:00:30	100	3.33	2.27
	13:56:04				
86.5	14:28:31	0:00:30	99.59	3.32	2.26
	14:29:01				
				average velocity (mph)	2.10

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: R15
Prepared By: RVW
Date: 01/19/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1								0.00
2								0.00
3								0.00
4								0.00
5								0.00

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: R15
Prepared By: RVW
Date: 01/19/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-3.69	3.31	0.24	0.25	0.03	1.04	0.49	1.49	846	0	3.12
Channel 2	-4.02	2.36	0.15	0.23	0.23	0.80	0.37	1.17	846	0	2.40
Channel 3	-1.71	2.38	0.16	0.25	0.21	0.52	0.24	0.75	846	0	1.56
Sum Channel	-9.00	5.95	0.55	0.65	-0.12	2.16	0.96	3.07	846	0	6.48

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: R15
Prepared By: RVW
Date: 01/19/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: R16
Prepared By: RVW
Date: 01/17/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.56	Y		1/17/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y		1/17/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	# 1 not detected; # 2 offset = 1.10m; # 3 in culture anomaly	Y	das	1/17/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	# 2 not detected on line 2.	Y		1/17/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Gaps checked		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	1.71 1.44 0.93 3.48	Y Y Y Y		1/17/2005 1/17/2005 1/17/2005 1/17/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: R16
Prepared By: RVW
Date: 01/17/05

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
9	8:01:02	0:00:28	100	3.57	2.44
	8:01:31				
30	8:26:48	0:00:27	100	3.70	2.53
	8:27:14				
49.5	8:51:01	0:00:28	100	3.57	2.44
	8:51:29				
94.5	10:33:55	0:00:24	100	4.17	2.84
	10:34:19				

average velocity (mph)	2.56

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: R16
Prepared By: RVW
Date: 01/17/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)
1	18	2.5	421337.88	3863324.38	Not Detected		
2	100	25	421362.87	3863331.35	163	421362.87	3863332.45
3	95.1	100	421361.38	3863354.55	Impossible to see nail in culture		

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: R16
Prepared By: RVW
Date: 01/17/05

Distance from anomaly to nail (m)
1.10

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: R16
Prepared By: RVW
Date: 01/17/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.58	2.81	0.53	0.52	0.02	0.57	0.43	1.76	2605	1	1.71
Channel 2	-1.26	2.07	0.33	0.34	0.03	0.48	0.40	1.71	2605	1	1.44
Channel 3	-1.27	1.63	0.27	0.30	0.15	0.31	0.29	1.22	2605	1	0.93
Sum Channel	-3.74	4.75	1.13	1.21	1.30	1.16	0.97	2.90	2601	1	3.48

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: R16
Prepared By: RVW
Date: 01/17/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: R17
Prepared By:
Date:

Item #	Defineable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.97	Y		1/11/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y		1/11/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	# 1 offset = 0.31m; # 2 offset = 0.15m; # 3 offset = 0.15m	Y		1/11/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	Other large anomalies present near # 1 and #2 could be geology. # 3 is an isolated peak.	Y		1/11/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Minor gaps at noted trees		das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤3.50 mV Ch 2 ≤2.75 mV Ch 3 ≤1.75 mV Sum of Channels 1,2,3 ≤8.00 mV	2.07 1.32 0.87 3.78	Y Y Y Y		1/11/2005 1/11/2005 1/11/2005 1/11/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: R17
Prepared By:
Date:

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
3	8:22:00	0:00:22	100	4.55	3.10
	8:22:22				
57	10:08:16	0:00:24	100	4.17	2.84
	10:08:41				
90	10:57:08	0:00:23	100	4.35	2.97
	10:57:31				

average velocity (mph)	2.97

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: R17
Prepared By:
Date:

Nail Locations (origin SW corner)

x(UTM m) 421362.87
y(UTM m) 3863323.61
In-situ nail locations

nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	65	25	421382.67	3863331.22	Peak of 21 mV on line 66, not picked as target	421382.98	3863331.22	0.31
2	50	50	421378.11	3863338.84	3	421377.96	3863338.84	0.15
3	75	75	421385.73	3863346.46	7	421385.88	3863346.45	0.15

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: R17
Prepared By:
Date:

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.53	3.71	0.81	0.76	0.71	0.69	0.37	1.16	2909	15	2.07
Channel 2	-0.93	2.25	0.50	0.46	0.30	0.44	0.23	0.73	2909	15	1.32
Channel 3	-0.47	1.77	0.31	0.28	0.12	0.29	0.15	0.46	2909	15	0.87
Sum Channel	-2.40	6.56	1.58	1.52	1.24	1.26	0.65	2.09	2909	15	3.78

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: R17
Prepared By:
Date:

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Qualtiy Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: R18
Prepared By: RVW
Date: 01/13/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.46	Y		1/13/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See Attached Figure	1/13/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	# 1 offset = 0.01	Y		1/13/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	# 1 not seen on line 1.5, other anomalies to the east	Y		1/13/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Tree @ 15, 79; minor gap		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	1.95 1.41 0.99 3.36	Y Y Y Y		1/13/2005 1/13/2005 1/13/2005 1/13/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: R18
Prepared By: RVW
Date: 01/13/05

Number of lines	27
5% of lines	1.35

Line		time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
	3	16:01:59	0:00:17	66	3.88	2.65
		16:02:16				
	10.5	16:05:30	0:00:15	50	3.33	2.27
		16:05:45				

average velocity (mph)	2.46

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: R18
Prepared By: RVW
Date: 01/13/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

		In-situ nail locations								
nail_ID		x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
	1	6	99	421395.18	3863353.77	2	421395.18	3863353.76	0.01

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: R18
Prepared By: RVW
Date: 01/13/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.79	3.56	0.60	0.66	0.50	0.65	0.42	1.89	769	14	1.95
Channel 2	-1.50	1.94	0.40	0.36	0.25	0.47	0.36	1.84	769	14	1.41
Channel 3	-1.21	1.40	0.25	0.26	0.29	0.33	0.29	1.50	769	14	0.99
Sum Channel	-4.24	4.90	0.97	0.90	0.43	1.12	0.86	4.19	769	14	3.36

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: R18
Prepared By: RVW
Date: 01/13/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: R20
Prepared By: RVW
Date: 01/12/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.15	Y		1/12/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y	See Attached Figure	1/12/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	# 1 offset = 0.15m; # 2 offset = 0.34m	Y		1/12/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	Both Nails not seen on line 30.1. Other anomalies to the east of nail # 1. Data gap to the east of #2.	Y	Minor tree gap measured; rest swept.	1/12/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Minor gap @ 66, 64. Larger gaps swept	1/12/2005	RVW
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤3.50 mV Ch 2 ≤2.75 mV Ch 3 ≤1.75 mV Sum of Channels 1,2,3 ≤8.00 mV	2.1 1.56 1.08 3.96	Y Y Y Y		1/12/2005 1/12/2005 1/12/2005 1/12/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: R20
Prepared By: RVW
Date: 01/12/05

Number of lines	57
5% of lines	2.85

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
6	14:59:45	0:00:20	60	3.00	2.05
	15:00:05				
33	15:34:17	0:00:22	74	3.36	2.29
	15:34:39				
54	16:12:39	0:00:18	56	3.11	2.12
	16:12:57				

average velocity (mph)	2.15

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: R20
Prepared By: RVW
Date: 01/12/05

Nail Locations (origin SW corner)

x(UTM m) 421454.28
y(UTM m) 3863323.59

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	33	99	421464.35	3863353.75	31	421464.5	3863353.75	0.15
2	33	90	421464.35	3863351.00	35	421464.65	3863351.16	0.34

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: R20
Prepared By: RVW
Date: 01/12/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.17	2.80	0.63	0.65	0.69	0.70	0.46	1.85	632	0	2.10
Channel 2	-0.81	2.31	0.54	0.49	0.52	0.52	0.36	1.58	632	0	1.56
Channel 3	-0.64	1.44	0.38	0.36	0.21	0.36	0.26	1.20	632	0	1.08
Sum Channel	-2.31	5.48	1.49	1.58	1.01	1.32	0.97	3.95	632	0	3.96

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: R20
Prepared By: RVW
Date: 01/12/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: S12
Prepared By: RVW
Date: 01/13/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.25	Y		1/13/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See attached map	1/13/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	# 1 offset = 0.15 m	Y		1/13/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	# 1 not seen on line 46.5 or 54.	Y		1/13/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		NA	No Gaps		das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	3.36 2.07 1.23 3.27	Y Y Y Y		1/13/2005 1/13/2005 1/13/2005 1/13/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: S12
Prepared By: RVW
Date: 01/13/05

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
33	16:16:01	0:00:08	28	3.50	2.39
	16:16:09				
46.5	16:24:55	0:00:09	28	3.11	2.12
	16:25:04				
61.5	17:00:40	0:00:08	28	3.50	2.39
	17:00:48				
87	17:18:00	0:00:09	28	3.11	2.12
	17:18:09				
				average velocity (mph)	2.25

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: S12
Prepared By: RVW
Date: 01/13/05

Nail Locations (origin SW corner)

x(UTM m) 421210.53
y(UTM m) 3863354.12

In-situ nail locations

nail_ID		x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
	1	50	0	421225.76	3863354.12		421225.61	3863354.12	0.15

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: S12
Prepared By: RVW
Date: 01/13/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-6.13	4.70	0.56	0.64	0.08	1.12	0.44	1.03	935	13	3.36
Channel 2	-2.52	3.16	0.41	0.32	0.14	0.69	0.26	0.88	935	13	2.07
Channel 3	-0.97	2.03	0.22	0.22	0.12	0.41	0.18	0.67	935	13	1.23
Sum Channel	-3.75	4.74	1.23	1.21	1.12	1.09	0.70	2.00	935	13	3.27

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: S12
Prepared By: RVW
Date: 01/13/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedure, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: S13
Prepared By: RVW
Date: 01/15/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.37	Y		1/15/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See attached map	1/15/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.		Y			das
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails		Y			das
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Trees at 4, 81; 65, 70.		das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV	4.41	N	Not used for target selection	1/15/2005	RVW
				Ch 2 ≤ 2.75 mV	2.94	N	Not used for target selection	1/15/2005	RVW
				Ch 3 ≤ 1.75 mV	1.80	N	Not used for target selection	1/15/2005	RVW
				Sum of Channels 1,2,3 ≤ 8.00 mV	4.92	Y		1/15/2005	RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: S13
Prepared By: RVW
Date: 01/15/05

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
7.5	12:31:26	0:00:37	85	2.30	1.57
	12:32:03				
31.5	13:11:17	0:00:22	85	3.86	2.64
	13:11:39				
51	13:35:22	0:00:23	85	3.70	2.52
	13:35:45				
81	14:24:05	0:00:21	85	4.05	2.76
	14:24:26				

average velocity (mph)	2.37

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: S13
Prepared By: RVW
Date: 01/15/05

Nail Locations (origin SW corner)

x(UTM m) 421241.00
y(UTM m) 3863354.11

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (ft)	Picked Target Y (ft)	Distance from anomaly to nail (ft)
1	1	1				1	1	1.00
2	33	28				33	27	0.30
3	33	52				33	51.9	0.10

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: S13
Prepared By: RVW
Date: 01/15/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-5.61	5.98	1.05	1.15	0.30	1.47	0.70	2.79	1586	0	4.41
Channel 2	-2.38	3.83	0.80	0.85	1.05	0.98	0.49	1.89	1586	0	2.94
Channel 3	-1.29	2.56	0.51	0.55	0.75	0.60	0.32	1.28	1586	0	1.80
Sum Channel	-6.21	4.91	0.58	0.51	-0.07	1.64	1.09	4.10	1586	0	4.92

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: S13
Prepared By: RVW
Date: 01/15/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: S14
Prepared By: RVW
Date: 01/13/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.64	Y		1/13/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See attached figure	1/13/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.		Y			das
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails		Y			das
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Small gaps, trees: 38, 48		das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	3.18 2.22 1.59 5.1	Y Y Y Y		1/13/2005 1/13/2005 1/13/2005 1/13/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: S14
Prepared By: RVW
Date: 01/13/05

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
12	14:05:27	0:00:38	100	2.63	1.79
	14:06:04				
42	14:47:20	0:00:23	100	4.35	2.97
	14:47:43				
70.5	15:44:47	0:00:24	100	4.17	2.84
	15:45:11				
90	16:23:51	0:00:23	100	4.35	2.97
	16:24:15				
				average velocity (mph)	2.64

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: S14
Prepared By: RVW
Date: 01/13/05

Nail Locations (origin SW corner)

x(UTM m)
y(UTM m)

	In-situ nail locations							
nail_ID	x (ft)	y (ft)	x (ft)	y(ft)	Matching Target Number	Picked Target X (ft)	Picked Target Y (ft)	Distance from anomaly to nail (ft)
1	10	15	10.00	15.00	Sum 17	10.5	15.4	0.64
2	125	125	25.00	25.00	40	24	27	2.24
3	130	135	30.00	35.00		30	36.5	1.50
								0.00
								0.00

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: S14
Prepared By: RVW
Date: 01/13/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-2.37	3.90	0.89	0.90	0.05	1.06	0.63	2.25	705	0	3.18
Channel 2	-2.75	3.05	0.56	0.51	0.21	0.74	0.47	1.68	705	0	2.22
Channel 3	-0.87	2.79	0.36	0.35	0.24	0.53	0.32	1.12	705	0	1.59
Sum Channel	-4.86	7.02	1.09	1.08	-0.04	1.70	1.23	4.36	705	0	5.10

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: S14
Prepared By: RVW
Date: 01/13/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: S15
Prepared By: D. Wolf
Date: 11/30/04

Item #	Defineable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.99 mph	Y		11/29/2004	DSW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y	See Attached Figure	11/29/2004	DSW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	3/5 are within detection radius	Y	See Attached Figure	11/29/2004	DSW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes	11/29/2004	DSW
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	QC Nails identified along lines	Y	See Attached Figure	11/29/2004	DSW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations	2 of 2 are within metric	Y	2 of 10 data gaps associated with trees or brush were evaluated: Trees @ 63, 90 (+ hillside); 88, 93.	11/29/2004	DSW / das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤3.50 mV	3.12	Y	Not used for target selection	11/29/2004	DSW
				Ch 2 ≤2.75 mV	2.46	Y	Not used for target selection	11/29/2004	DSW
				Ch 3 ≤1.75 mV	1.9	N	Not used for target selection	11/29/2004	DSW
				Sum of Channels 1,2,3 ≤8.00 mV	6.91	Y		11/29/2004	DSW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: S15
Prepared By: D. Wolf
Date: 11/30/04

Number of lines	68
5% of lines	3.4

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
14	16:21:53	0:00:26	100	3.846153846	2.623076923
	16:22:19				
20	16:25:51	0:00:23	100	4.347826087	2.965217391
	16:25:28				
75	17:23:02	0:00:21	100	4.761904762	3.247619048
	17:23:23				
30	16:31:38	0:00:21	100	4.761904762	3.247619048
	16:31:59				
27	16:29:47	0:00:24	100	4.166666667	2.841666667
	16:30:11				
				average velocity (mph)	2.985039815

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: S15
Prepared By: D. Wolf
Date: 11/30/04

Nail Locations (origin SW corner)

x(UTM m)	421301.94
y(UTM m)	3863354.09

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (m)	y(m)	x (utm m)	y(utm m)	Distance from anomaly to nail (m)
1	6	6	1.8288	1.8288	421303.77	3863355.92	0.17
2	18	5	5.4864	1.524	421307.43	3863355.61	ND
3	60	30	18.288	9.144	421320.23	3863363.23	0.0
4	60	76	18.288	23.1648	421320.23	3863377.25	0.7
5	36	38	10.9728	11.5824	421312.91	3863365.67	0.3

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: S15
Prepared By: D. Wolf
Date: 11/30/04

Camp Croft Background Response Statistics and Noise Estimates

Grids S15_T15

Polygon 1

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.60	3.82	1.08	1.00	0.72	0.91	0.62	1.60	244.00	0.00	2.73
Channel 2	-1.33	3.78	0.85	0.80	0.43	0.79	0.57	1.69	244.00	0.00	2.37
Channel 3	-0.61	4.02	0.60	0.45	0.01	0.73	0.44	1.26	244.00	0.00	2.19
Sum Channel	-3.32	11.62	2.52	2.28	1.19	2.28	1.57	4.15	244.00	0.00	6.84

Polygon 2

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.65	8.06	1.03	0.98	0.48	1.17	0.83	3.55	517.00	0.00	3.51
Channel 2	-1.55	5.00	0.81	0.77	0.57	0.88	0.63	2.49	517.00	0.00	2.64
Channel 3	-0.76	3.92	0.59	0.51	0.17	0.66	0.44	1.67	517.00	0.00	1.98
Sum Channel	-3.43	15.30	2.43	2.43	0.67	2.56	1.81	7.27	517.00	0.00	7.68

Polygon 3

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.25	7.73	0.97	1.00	0.34	1.04	0.69	2.47	417.00	0.00	3.12
Channel 2	-6.49	4.08	0.71	0.77	0.44	0.79	0.79	4.33	417.00	0.00	2.37
Channel 3	-2.24	4.48	0.45	0.42	0.21	0.51	0.42	1.65	417.00	0.00	1.53
Sum Channel	-2.72	16.29	2.13	2.04	1.44	2.07	1.46	4.97	417.00	0.00	6.21

Average of Three Polygon Areas

Channel	*Noise Estimate*
Channel 1	3.12
Channel 2	2.46
Channel 3	1.90
Sum Channel	6.91

Background Noise Metric

	Polgon 1	Polgon 2	Polgon 3	Average
Mean of Sum	2.52	2.43	2.13	2.36
Std. dev. Of Sum	2.28	2.56	2.07	2.30

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: S15
Prepared By: D. Wolf
Date: 11/30/04

Total obstructions	10					
20% of obstructions	2					
south boundary	x (m)		y (m)	x (ft)	y(ft)	
Digital obstruction location	13.9		0	45.60367		0
field measured obstruction location				46		0
difference (ft)				0.396325		0
west boundary	x (m)		y (m)	x (ft)	y(ft)	
Digital obstruction location	0		22	0	72.17848	
field measured obstruction location				0	73.5	
difference (ft)				0	1.321522	
north boundary	x (m)		y (m)	x (ft)	y(ft)	
Digital obstruction location	20.1		0	65.94488		0
field measured obstruction location				62		0
difference (ft)				3.944882		0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: S16
Prepared By: D. Wolf
Date: 12/02/04

Item #	Defineable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	≤3 mph**	1.82 mph	Y		12/2/2004	DSW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y	See Attached Figure	12/2/2004	DSW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	2 of 3 nails detected are within metric	Y	2 of 3 nails detected. See Attached Figure	12/2/2004	DSW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes	12/2/2004	DSW
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	2 of 3 nails detected at their actual location	Y	2 of 3 nails detected. See Attached Figure	12/2/2004	DSW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations	TBD	Y	Trees in gaps @ 11, 6.5; 11, 61; 60, 23.3 match gap positions.	12/2/2004	DSW / das 03-08-05
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤3.50 mV	2.37	Y	Not used for target selection	12/2/2004	DSW
				Ch 2 ≤2.75 mV	1.75	Y	Not used for target selection	12/2/2004	DSW
				Ch 3 ≤1.75 mV	1.06	Y	Not used for target selection	12/2/2004	DSW
				Sum of Channels 1,2,3 ≤8.00 mV	4.97	Y		12/2/2004	DSW

NA - Not Analzed see comment
** Metric updated from 2 mph to 3 mph. GPO speed tests demonstrate key seed items were detected at a speed of 3 mph

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: S16
Prepared By: D. Wolf
Date: 12/02/04

Number of lines		68				
5% of lines		3.4				
Line		time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
	22.5	13:18:11	0:00:36	100	2.777777778	1.894444444
		13:18:47				
	48	13:54:18	0:00:41	100	2.43902439	1.663414634
		13:54:59				
	52.5	14:01:04	0:00:37	100	2.702702703	1.843243243
		14:01:41				
	81	14:34:06	0:00:36	100	2.777777778	1.894444444
		14:34:42				
					average velocity (mph)	1.823886692

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: S16
Prepared By: D. Wolf
Date: 12/02/04

Nail Locations (origin SW corner)

x(UTM m)		421332.41						
y(UTM m)		3863354.09						
		In-situ nail locations						
nail_ID		x (ft)	y (ft)	x (m)	y(m)	x (utm m)	y(utm m)	Distance from anomaly to nail (m)
	1	9	9	2.7432	2.7432	421335.15	3863356.83	0
	2	18	18	5.4864	5.4864	421337.90	3863359.58	0
	3	24	23	7.3152	7.0104	421339.73	3863361.10	ND

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: S16
Prepared By: D. Wolf
Date: 12/31/04

Report Statistics and Noise Estimates

Grids S16_T16

Polygon 1

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.28	3.20	0.84	0.68	0.26	0.87	0.49	1.51	267.00	0.00	2.61
Channel 2	-1.45	1.97	0.23	0.26	0.65	0.64	0.40	1.64	267.00	0.00	1.92
Channel 3	-0.98	1.16	0.09	0.09	0.07	0.37	0.26	1.15	267.00	0.00	1.11
Sum Channel	-3.72	5.67	1.19	1.17	-0.49	1.80	0.98	3.24	267.00	0.00	5.40

Polygon 2

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-0.75	2.72	0.63	0.62	0.08	0.64	0.39	1.43	639.00	0.00	1.92
Channel 2	-1.05	1.97	0.25	0.21	0.11	0.53	0.36	1.43	639.00	0.00	1.59
Channel 3	-0.76	1.25	0.15	0.12	0.06	0.33	0.24	1.05	639.00	0.00	0.99
Sum Channel	-1.70	5.36	1.03	0.80	-0.31	1.43	0.88	3.36	639.00	0.00	4.29

Polygon 3

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.40	3.69	0.83	0.72	0.25	0.86	0.47	1.45	433.00	0.00	2.58
Channel 2	-1.20	1.74	0.16	0.15	0.18	0.58	0.37	1.30	433.00	0.00	1.74
Channel 3	-0.86	0.97	0.09	0.09	0.00	0.36	0.27	0.96	433.00	0.00	1.08
Sum Channel	-2.94	6.02	1.04	0.98	-0.61	1.74	0.98	2.76	433.00	0.00	5.22

Average of Three Polygon Areas

Channel	*Noise Estimate*
Channel 1	2.37
Channel 2	1.75
Channel 3	1.06
Sum Channel	4.97

Background Noise Metric

	Polgon 1	Polgon 2	Polgon 3	Average
Mean of Sum	1.19	1.03	1.04	1.09
Std. dev. Of Sum	1.80	1.43	1.74	1.66

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: S16
Prepared By: D. Wolf
Date: 12/02/04

Number of obstructed (effected) lines	29
20% of effected lines	5.8

Line

DGM Quality Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: S17
Prepared By: RVW
Date: 01/12/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.88	Y		1/11/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y	See Attached Figure	1/11/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	# 1 offset = 0.31m; # 2 offset = 0.27m; # 3 offset = 0.16m	Y		1/12/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	# 1 not seen on lines 57 or 63. Other anomalies around # 2. # 3 not seen on line 72, other anomalies to the east.	Y		1/12/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Tree at 15.5, 90		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤3.50 mV Ch 2 ≤2.75 mV Ch 3 ≤1.75 mV Sum of Channels 1,2,3 ≤8.00 mV	2.22 1.41 0.93 3.93	Y Y Y Y		1/12/2005 1/12/2005 1/12/2005 1/12/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: S17
Prepared By: RVW
Date: 01/12/05

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
3	8:22:22	0:00:23	100	4.35	2.97
	8:22:44				
21	8:57:10	0:00:24	100	4.17	2.84
	8:57:34				
66	10:19:53	0:00:24	100	4.17	2.84
	10:20:18				

average velocity (mph)	2.88

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: S17
Prepared By: RVW
Date: 01/12/05

Nail Locations (origin SW corner)

x(UTM m) 421301.94
y(UTM m) 3863354.09

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	60	30	421381.16	3863363.21	18	421381.16	3863363.52	0.31
2	60	50	421381.16	3863369.31	24	421381.41	3863369.4	0.27
3	75	50	421385.73	3863369.31	9	421385.89	3863369.31	0.16

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: S17
Prepared By: RVW
Date: 01/12/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.93	3.28	0.87	0.89	0.95	0.74	0.40	1.21	3030	0	2.22
Channel 2	-1.13	2.33	0.56	0.60	0.53	0.47	0.26	0.81	3030	0	1.41
Channel 3	-0.89	1.82	0.35	0.35	0.32	0.31	0.17	0.57	3030	0	0.93
Sum Channel	-3.40	5.61	1.62	1.67	1.39	1.31	0.72	2.27	3030	0	3.93

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: S17
Prepared By: RVW
Date: 01/12/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: S18
Prepared By: D. Wolf
Date: 12/10/04

Item #	Defineable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	≤3 mph**	2.49 mph	Y		12/10/2004	DSW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y	See Attached Figure. Acute data gap positioning differences along line observed.	12/10/2004	DSW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	3 of 3 less than 0.3 m	Y	3 of 3 detected	12/10/2004	DSW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	TRUE	Y	Observed in field	12/10/2004	DSW
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	3 of 3 less than 0.3 m	Y		12/10/2004	DSW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Gaps check with trtrees at 84, 8; 70, 38	12/10/2004	DSW
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤3.39 mV	1.96	Y		12/10/2004	DSW / AJP
				Ch 2 ≤2.72 mV	1.29	Y		12/10/2004	DSW / AJP
				Ch 3 ≤1.73 mV	0.89	Y		12/10/2004	DSW / AJP
				Sum of Channels 1,2,3 ≤6.53 mV	3.46	Y		12/10/2004	DSW / AJP

NA - Not Analzed see comment
** Metric updated from 2 mph to 3 mph. GPO speed tests demonstrate key seed items were detected at a speed of 3 mph
*Background noise in this grid is greater than the GPO.

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: S18
Prepared By: D. Wolf
Date: 12/10/04

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
3	13:26:38	0:00:29	100	3.448275862	2.351724138
	13:27:07				
16.5	13:45:02	0:00:26	100	3.846153846	2.623076923
	13:45:28				
55.5	14:36:09	0:00:26	100	3.846153846	2.623076923
	14:36:35				
27	13:59:36	0:00:26	100	3.448275862	2.351724138
	14:00:02				

average velocity (mph)	2.49

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: S18
Prepared By: D. Wolf
Date: 12/10/04

Nail Locations (origin SW corner)

x(UTM m)	421393.30
y(UTM m)	3863354.00

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (m)	y(m)	x (utm m)	y(utm m)	Distance from target to nail (m)
1	30	100	9.144	30.48	421402.44	3863384.48	0.3
2	15	70	4.572	21.336	421397.87	3863375.34	0
3	2	24	0.6096	7.3152	421393.91	3863361.32	0

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: S18
Prepared By: D. Wolf
Date: 12/10/04

Camp Croft Background Response Statistics and Noise Estimates

Grid S18

Polygon 1

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.58	2.88	0.69	0.74	0.70	0.63	0.40	2.03	1802.00	0.00	1.89
Channel 2	-0.90	1.94	0.49	0.52	0.49	0.44	0.36	1.89	1802.00	0.00	1.32
Channel 3	-0.52	1.52	0.33	0.33	0.18	0.30	0.27	1.49	1802.00	0.00	0.90
Sum Channel	-2.02	4.89	1.44	1.43	1.43	1.17	0.78	4.07	1802.00	0.00	3.51

Polygon 2

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-0.98	2.46	0.68	0.67	0.60	0.59	0.39	1.84	816.00	0.00	1.77
Channel 2	-0.59	1.59	0.45	0.45	0.48	0.38	0.32	1.67	816.00	0.00	1.14
Channel 3	-0.43	1.34	0.31	0.31	0.25	0.28	0.25	1.36	816.00	0.00	0.84
Sum Channel	-1.38	4.77	1.34	1.31	1.12	1.05	0.74	3.84	816.00	0.00	3.15

Polygon 3

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-0.87	3.15	0.82	0.81	0.26	0.74	0.42	2.04	729.00	8.00	2.22
Channel 2	-0.79	2.10	0.52	0.48	0.32	0.47	0.35	1.73	729.00	8.00	1.41
Channel 3	-0.35	1.50	0.35	0.34	0.02	0.31	0.27	1.42	729.00	8.00	0.93
Sum Channel	-1.45	5.42	1.45	1.41	0.63	1.24	0.83	3.99	729.00	8.00	3.72

Average of Three Polygon Areas **Background Noise Metric**

Channel	*Noise Estimate*		Polgon 1	Polgon 2	Polgon 3	Average
Channel 1	1.96	Mean of Sum	0.66	0.98	1.09	0.91
Channel 2	1.29	Std. dev. Of Sum	2.15	2.45	2.17	2.26
Channel 3	0.89					
Sum Channel	3.46					

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: S18
Prepared By: D. Wolf
Date: 12/10/04

Number of obstructed (effected) lines	29
20% of affected lines	5.8

Line

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: S19
Prepared By: RVW
Date: 01/12/05

Item #	Defineable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	1.7	Y		1/11/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y	See Attached Figure	1/11/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	# 1 offset = 0.31m; # 2 offset = 0.30m; # 3 offset = 0.19m	Y		1/12/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	#1 not seen on lines 30 or 25.5. #2 not seen on lines 27 or 33. #3 not seem on lines 48 or 52.5.	Y		1/12/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Gaps check at 10, 12; 51, 11; 60, 46.		das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤3.50 mV Ch 2 ≤2.75 mV Ch 3 ≤1.75 mV Sum of Channels 1,2,3 ≤8.00 mV	2.91 1.98 1.44 3.21	Y Y Y Y		1/12/2005 1/12/2005 1/12/2005 1/12/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: S19
Prepared By: RVW
Date: 01/12/05

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
21	11:15:03	0:00:31	93	3.00	2.05
	11:15:34				
36	11:32:09	0:00:39	83	2.13	1.45
	11:32:47				
78	12:19:42	0:00:32	75	2.34	1.60
	12:20:14				

average velocity (mph)	1.70

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: S19
Prepared By: RVW
Date: 01/12/05

Nail Locations (origin SW corner)

x(UTM m) 421301.94
y(UTM m) 3863354.09

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	27	27	421432.03	3863362.28	44	421432.31	3863362.14	0.31
2	30	50	421432.94	3863369.29	56	421432.96	3863368.99	0.30
3	50	50	421439.02	3863369.29	121	421438.9	3863369.14	0.19

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: S19
Prepared By: RVW
Date: 01/12/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-4.71	4.86	0.52	0.47	-0.02	0.97	0.66	2.75	1534	17	2.91
Channel 2	-4.60	3.54	0.36	0.32	0.06	0.66	0.50	2.22	1534	17	1.98
Channel 3	-4.17	2.38	0.29	0.34	0.13	0.48	0.40	1.73	1534	17	1.44
Sum Channel	-2.02	4.84	0.76	0.55	0.50	1.07	0.91	4.06	1534	17	3.21

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: S19
Prepared By: RVW
Date: 01/12/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: S20
Prepared By: RVW
Date: 01/17/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.17	Y		1/17/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	plotted	Y	See attached figure	1/17/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	# 1 offset = 0.29m	Y		1/17/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	# 1 not seen on line 3.	Y		1/17/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Gsps 5, 10; 11, 32 check with tree measurement.		
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤ 3.50 mV Ch 2 ≤ 2.75 mV Ch 3 ≤ 1.75 mV Sum of Channels 1,2,3 ≤ 8.00 mV	2.34 1.56 1.14 4.53	Y Y Y Y		1/17/2005 1/17/2005 1/17/2005 1/17/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: S20
Prepared By: RVW
Date: 01/17/05

Number of lines	54
5% of lines	2.7

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
0	16:35:22	0:00:15	50	3.33	2.27
	16:35:38				
16.5	15:12:09	0:00:19	50	2.63	1.79
	15:12:28				
43.5	15:48:57	0:00:07	25	3.57	2.44
	15:49:05				

average velocity (mph)	2.17

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: S20
Prepared By: RVW
Date: 01/17/05

Nail Locations (origin SW corner)

x(UTM m)	421454.29
y(UTM m)	3863354.05

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	1	36	421454.59	3863365.02		421454.32	3863365.13	0.29

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: S20
Prepared By: RVW
Date: 01/17/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.41	2.94	0.45	0.40	-0.01	0.78	0.62	2.37	387	4	2.34
Channel 2	-0.99	1.88	0.31	0.26	-0.01	0.52	0.46	1.84	387	4	1.56
Channel 3	-0.93	1.39	0.26	0.28	0.01	0.38	0.34	1.43	387	4	1.14
Sum Channel	-2.75	5.22	1.02	1.07	0.48	1.51	1.26	4.59	387	4	4.53

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: S20
Prepared By: RVW
Date: 01/17/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: T15
Prepared By: D. Wolf
Date: 12/01/04

Item #	Defineable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.87 mph	Y		12/1/2004	DSW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y	See Attached Figure	12/1/2004	DSW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	No QC nails installed	Y	Partial grid and included as one data set with grid S15	12/1/2004	DSW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes	12/1/2004	DSW
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	No QC nails installed	NA	Partial grid and included as one data set with grid S15	12/1/2004	DSW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations	0.3 m	Y	1 of 2 data gaps evaluated	12/1/2004	DSW
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤3.50 mV	3.12	Y	Not used for target selection	12/1/2004	DSW
				Ch 2 ≤2.75 mV	2.46	Y	Not used for target selection	12/1/2004	DSW
				Ch 3 ≤1.75 mV	1.9	N	Not used for target selection	12/1/2004	DSW
				Sum of Channels 1,2,3 ≤8.00 mV	6.91	Y		12/1/2004	DSW

NA - Not Analyzed see comment

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: T15
Prepared By: D. Wolf
Date: 12/01/04

Number of lines	68
5% of lines	3.4

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
9	16:19:48	0:00:06	25	4.166666667	2.841666667
	16:19:54				
20	16:25:21	0:00:07	25	3.571428571	2.435714286
	16:25:28				
44	16:38:50	0:00:06	25	4.166666667	2.841666667
	16:38:56				
96	17:45:37	0:00:06	25	4.166666667	2.841666667
	17:45:31				
74	17:21:54	0:00:05	25	5	3.41
	17:21:59				
				average velocity (mph)	2.874142857

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: T15
Prepared By: D. Wolf
Date: 12/01/04

NOT ANALYZED

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: T15
Prepared By: D. Wolf
Date: 12/01/04

Camp Croft Background Response Statistics and Noise Estimates

Grids S15_T15

Polygon 1

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.60	3.82	1.08	1.00	0.72	0.91	0.62	1.60	244.00	0.00	2.73
Channel 2	-1.33	3.78	0.85	0.80	0.43	0.79	0.57	1.69	244.00	0.00	2.37
Channel 3	-0.61	4.02	0.60	0.45	0.01	0.73	0.44	1.26	244.00	0.00	2.19
Sum Channel	-3.32	11.62	2.52	2.28	1.19	2.28	1.57	4.15	244.00	0.00	6.84

Polygon 2

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.65	8.06	1.03	0.98	0.48	1.17	0.83	3.55	517.00	0.00	3.51
Channel 2	-1.55	5.00	0.81	0.77	0.57	0.88	0.63	2.49	517.00	0.00	2.64
Channel 3	-0.76	3.92	0.59	0.51	0.17	0.66	0.44	1.67	517.00	0.00	1.98
Sum Channel	-3.43	15.30	2.43	2.43	0.67	2.56	1.81	7.27	517.00	0.00	7.68

Polygon 3

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.25	7.73	0.97	1.00	0.34	1.04	0.69	2.47	417.00	0.00	3.12
Channel 2	-6.49	4.08	0.71	0.77	0.44	0.79	0.79	4.33	417.00	0.00	2.37
Channel 3	-2.24	4.48	0.45	0.42	0.21	0.51	0.42	1.65	417.00	0.00	1.53
Sum Channel	-2.72	16.29	2.13	2.04	1.44	2.07	1.46	4.97	417.00	0.00	6.21

Average of Three Polygon Areas

Channel	*Noise Estimate*
Channel 1	3.12
Channel 2	2.46
Channel 3	1.90
Sum Channel	6.91

Background Noise Metric

	Polgon 1	Polgon 2	Polgon 3	Average
Mean of Sum	2.52	2.43	2.13	2.36
Std. dev. Of Sum	2.28	2.56	2.07	2.30

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: T15
Prepared By: D. Wolf
Date: 12/01/04

Total obstructions		2			
20% of obstructions		0.4			
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location		25.8	0	84.64567	0
field measured obstruction location				85.5	0
difference (ft)				0.854331	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: T16
Prepared By: D. Wolf
Date: 12/02/04

Item #	Defineable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	≤3 mph**	1.99 mph	Y		12/2/2004	DSW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y	See Attached Figure	12/2/2004	DSW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	2 of 3 are apparemtly outside of metric by .5 ft.	N	Offset does not occur on governing grid to south; occurrence not seen in other grids. No further analysis called for.	12/2/2004	DSW / das
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes	12/2/2004	DSW
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	2 of 3 are apparemtly outside of metric by .5 ft.	N	Offset does not occur on governing grid to south; occurrence not seen in other grids. No further analysis called for.	12/2/2004	DSW / das
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Gaps check with tree locations	12/2/2004	das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤3.50 mV	2.37	Y	Not used for target selection	12/2/2004	DSW
				Ch 2 ≤2.75 mV	1.75	Y	Not used for target selection	12/2/2004	DSW
				Ch 3 ≤1.75 mV	1.06	Y	Not used for target selection	12/2/2004	DSW
				Sum of Channels 1,2,3 ≤8.00 mV	4.97	Y		12/2/2004	DSW

NA - Not Analyzed see comment
** Metric updated from 2 mph to 3 mph. GPO speed tests demonstrate key seed items were detected at a speed of 3 mph

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: T16
Prepared By: D. Wolf
Date: 12/02/04

Number of lines	68
5% of lines	3.4

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
4.5	12:23:00	0:00:14	45	3.214285714	2.192142857
	12:23:14				
33	13:31:11	0:00:16	45	2.8125	1.918125
	13:31:27				
66	14:21:03	0:00:15	45	3	2.046
	14:21:18				
76.5	14:29:27	0:00:17	45	2.647058824	1.805294118
	14:29:44				
				average velocity (mph)	1.990390494

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: T16
Prepared By: D. Wolf
Date: 12/02/04

Nail Locations (origin SGrid T 16

	naeva	ze
x(UTM m)	421332.42	421333.48
y(UTM m)	3863384.56	3863385.24

	In-situ nail locations						
nail_ID	x (ft)	y (ft)	x (m)	y(m)	x (utm m)	y(utm m)	Distance from anomaly to nail (m)
1	70	20	21.3360427	6.096012192	421354.82	3863391.34	0.6
2	64	14	19.507239	4.267208534	421352.99	3863389.51	0.6
3	88	39	26.8224536	11.88722377	421360.30	3863397.13	0.6

								Distance from anomaly to nail (m)
								0
								0
nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	70	20	70	20	7	72	20	2
2	64	14	64	14	6	66	14	2
3	88	39	88	39	95	87	38	1.414213562
4								0
5								
6								

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: T16
Prepared By: D. Wolf
Date: 12/02/04

Camp Croft Background Response Statistics and Noise Estimates

Grids S16_T16

Polygon 1

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.28	3.20	0.84	0.68	0.26	0.87	0.49	1.51	267.00	0.00	2.61
Channel 2	-1.45	1.97	0.23	0.26	0.65	0.64	0.40	1.64	267.00	0.00	1.92
Channel 3	-0.98	1.16	0.09	0.09	0.07	0.37	0.26	1.15	267.00	0.00	1.11
Sum Channel	-3.72	5.67	1.19	1.17	-0.49	1.80	0.98	3.24	267.00	0.00	5.40

Polygon 2

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-0.75	2.72	0.63	0.62	0.08	0.64	0.39	1.43	639.00	0.00	1.92
Channel 2	-1.05	1.97	0.25	0.21	0.11	0.53	0.36	1.43	639.00	0.00	1.59
Channel 3	-0.76	1.25	0.15	0.12	0.06	0.33	0.24	1.05	639.00	0.00	0.99
Sum Channel	-1.70	5.36	1.03	0.80	-0.31	1.43	0.88	3.36	639.00	0.00	4.29

Polygon 3

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.40	3.69	0.83	0.72	0.25	0.86	0.47	1.45	433.00	0.00	2.58
Channel 2	-1.20	1.74	0.16	0.15	0.18	0.58	0.37	1.30	433.00	0.00	1.74
Channel 3	-0.86	0.97	0.09	0.09	0.00	0.36	0.27	0.96	433.00	0.00	1.08
Sum Channel	-2.94	6.02	1.04	0.98	-0.61	1.74	0.98	2.76	433.00	0.00	5.22

Average of Three Polygon Areas

Channel	*Noise Estimate*
Channel 1	2.37
Channel 2	1.75
Channel 3	1.06
Sum Channel	4.97

Background Noise Metric

	Polgon 1	Polgon 2	Polgon 3	Average
Mean of Sum	1.19	1.03	1.04	1.09
Std. dev. Of Sum	1.80	1.43	1.74	1.66

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: T16
Prepared By: D. Wolf
Date: 12/02/04

Number of obstructed (effected) lines	29
20% of effected lines	5.8

Line

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: T17
Prepared By: RVW
Date: 01/12/05

Item #	Definable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	3 mph	2.53	Y		1/11/2005	RVW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y		1/11/2005	RVW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	No data is collected over nail # 1. # 2 offset = 0.12	Y		1/12/2005	RVW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	See Field Data Sheet	Y	See Field Notes		
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	Anomalies on either side of nails # 2 and 3. # 1 not detected on line 97.5.	Y		1/12/2005	RVW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		Y	Tree at 80, 61 agrees with gap		das
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤3.50 mV Ch 2 ≤2.75 mV Ch 3 ≤1.75 mV Sum of Channels 1,2,3 ≤8.00 mV	2.4 1.56 1.08 4.53	Y Y Y Y		1/12/2005 1/12/2005 1/12/2005 1/12/2005	RVW RVW RVW RVW

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: T17
Prepared By: RVW
Date: 01/12/05

Number of lines	66
5% of lines	3.3

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
6	8:26:04	0:00:22	100	4.55	3.10
	8:26:26				
30	9:08:45	0:00:45	100	2.22	1.52
	9:09:30				
75	10:30:49	0:00:23	100	4.35	2.97
	10:31:12				

average velocity (mph)	2.53

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: T17
Prepared By: RVW
Date: 01/12/05

Nail Locations (origin SW corner)

x(UTM m) 421362.89
y(UTM m) 3863384.55

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (utm m)	y(utm m)	Matching Target Number	Picked Target X (utm m)	Picked Target Y (utm m)	Distance from anomaly to nail (m)
1	99	0	421393.05	3863384.54	Data not collected over nail			
2	5	25	421364.41	3863392.17	29	421364.26	3863392.01	0.22
3	48	51	421377.51	3863400.09	14	421377.5	3863399.97	0.12

ND=non-detect

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: T17
Prepared By: RVW
Date: 01/12/05

Camp Croft Background Response Statistics and Noise Estimates

Grids
Polygons

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-2.13	3.45	0.73	0.78	1.07	0.80	0.46	1.39	2168	8	2.40
Channel 2	-1.04	2.52	0.46	0.44	0.33	0.52	0.30	0.94	2168	8	1.56
Channel 3	-1.11	1.94	0.33	0.29	0.13	0.36	0.21	0.61	2168	8	1.08
Sum Channel	-3.17	7.11	1.43	1.32	1.22	1.51	0.87	2.57	2168	8	4.53

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: T17
Prepared By: RVW
Date: 01/12/05

Total obstructions					
20% of obstructions					
south boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
west boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0
north boundary	x (m)	y (m)	x (ft)	y(ft)	
Digital obstruction location					
field measured obstruction location					
difference (ft)				0	0

DGM Quality Control Procedures, Tests and Metric Summary

Site: Former Camp Croft, SC
Grid: T18
Prepared By: D. Wolf
Date: 12/10/04

Item #	Defineable Feature of Work	QC Test or procedure	Testing Frequency	Metric	QC Results or Actions	Pass QC (Y/N)	Comments	Date	QC Performed by:
1	Survey Speed	Calculate speed along survey lines	5% of unobstructed lines in every grid or dataset	≤3 mph**	2.50 mph	Y		12/10/2004	DSW
2	Data coverage & fiducial processing	Plot locations of all data points on map of grid/dataset	Every grid or dataset	Symbol plots showing the locations of all measurement points have no obvious errors in data positioning.	Plotted	Y	See Attached Figure. Acute data gap positioning differences along line observed.	12/10/2004	DSW
		Place blind QC nails along survey lines	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	Anomalies associated with blind QC nails are no more than 0.5 meter from their actual locations.	2 of 2 approximately 0.5m	Y		12/10/2004	DSW
3	Across-track gaps	On-site QC to observe data collection	On-site QC to observe data collection minimum three (3) times a day	No observed deviations greater than ±0.25 meter	TRUE	Y	Observed in field	12/10/2004	DSW
		Place blind QC nails along survey lines (nails from Item #2 will be used for this test)	Blind QC nails will be placed along 5% of the lines in a 30mx30m grid; greater numbers may be placed in rough terrain, at the discretion of Zapata Engineering's on-site QC personnel	No anomalies observed on lines outside the detection radius of the QC nails	2 of 2 detected	Y		12/10/2004	DSW
4	Along-track data gaps	On-site QC to measure actual location of data-gaps associated with known obstructions	On-site QC will measure actual locations of 20% of gaps in a 30mx30m grid/dataset	Gaps are shown in data maps within ±0.5 meter of their actual locations		N		12/10/2004	DSW
5	Background Noise	Calculate statistics of background measurements	Every grid or dataset	Ch 1 ≤3.39 mV	2.17	Y		12/10/2004	DSW / AJP
				Ch 2 ≤2.72 mV	1.49	Y		12/10/2004	DSW / AJP
				Ch 3 ≤1.73 mV	0.98	Y		12/10/2004	DSW / AJP
				Sum of Channels 1,2,3 ≤6.53 mV	4.11	Y		12/10/2004	DSW / AJP

NA - Not Analzed see comment
** Metric updated from 2 mph to 3 mph. GPO speed tests demonstrate key seed items were detected at a speed of 3 mph
*Background noise in this grid is greater than the GPO.

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Daily Field QC Procedures)

Site: Former Camp Croft, SC
Grid: T18
Prepared By: D. Wolf
Date: 12/10/04

	Date Collected	Time	Metric	Pass (Y or N)
Static/Standard Test	11/27/2004	AM	20% of all measurements	
			Channel 1 - 4 mV	Y
			Channel 2 - 2.5 mV	Y
			Channel 3 - 1.3 mV	Y
			Channel 4 - 0.5 mV	NA
Static/Standard Test	11/27/2004	PM	20% of all measurements	
			Channel 1 - 3.75 mV	Y
			Channel 2 - 2.1 mV	Y
			Channel 3 - 1 mV	Y
			Channel 4 - 0.4 mV	NA

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Speed)

Site: Former Camp Croft, SC
Grid: T18
Prepared By: D. Wolf
Date: 12/10/04

Number of lines	67
5% of lines	3.35

Line	time	delta time	distance (ft)	velocity (ft/s)	velocity (mph)
13.5	13:40:23	0:00:28	100	3.571428571	2.435714286
	13:40:51				
34.5	14:07:17	0:00:27	100	3.703703704	2.525925926
	14:07:44				
73.5	15:04:30	0:00:27	100	3.703703704	2.525925926
	15:04:57				
93	15:36:14	0:00:27	100	3.703703704	2.525925926
	15:36:41				

average velocity (mph)	2.50

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (QC Survey Nails)

Site: Former Camp Croft, SC
Grid: T18
Prepared By: D. Wolf
Date: 12/10/04

Nail Locations (origin SW corner)

x(UTM m)	421393.40
y(UTM m)	3863385.00

In-situ nail locations

nail_ID	x (ft)	y (ft)	x (m)	y(m)	x (utm m)	y(utm m)	Distance from target to nail (m)
1	1	25	0.3048	7.62	421393.70	3863392.62	0.5
2	1	50	0.3048	15.24	421393.70	3863400.24	0.6

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Background)

Site: Former Camp Croft, SC
Grid: T18
Prepared By: D. Wolf
Date: 12/10/04

Camp Croft Background Response Statistics and Noise Estimates

Grid T18

Polygon 1

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-0.84	3.10	0.84	0.81	0.56	0.68	0.41	1.96	819.00	0.00	2.04
Channel 2	-0.62	1.98	0.59	0.58	0.41	0.47	0.36	1.81	819.00	0.00	1.41
Channel 3	-0.33	1.40	0.41	0.42	0.30	0.31	0.27	1.44	819.00	0.00	0.93
Sum Channel	-1.51	5.05	1.68	1.50	1.29	1.24	0.83	4.06	819.00	0.00	3.72

Polygon 2

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-0.87	4.27	0.71	0.63	0.15	0.80	0.43	2.41	876.00	0.00	2.40
Channel 2	-0.74	2.65	0.50	0.46	0.22	0.54	0.38	2.20	876.00	0.00	1.62
Channel 3	-0.45	1.64	0.34	0.34	0.10	0.34	0.30	1.64	876.00	0.00	1.02
Sum Channel	-1.86	8.26	1.45	1.30	0.88	1.50	0.87	4.93	876.00	0.00	4.50

Polygon 3

Channel	*Minimum*	*Maximum*	*Mean*	*Median*	*Mode*	*Std.dev.*	*1st diff.StD.*	*4th diff.StD.*	*# of points*	*# of dummies*	*Noise Estimate*
Channel 1	-1.23	3.16	0.65	0.69	0.60	0.69	0.44	2.12	788.00	0.00	2.07
Channel 2	-0.73	2.07	0.47	0.49	0.41	0.48	0.39	2.05	788.00	0.00	1.44
Channel 3	-0.83	1.49	0.31	0.33	0.45	0.33	0.28	1.48	788.00	0.00	0.99
Sum Channel	-2.34	6.27	1.37	1.43	1.87	1.37	0.89	4.55	788.00	0.00	4.11

Average of Three Polygon Areas

Channel	*Noise Estimate*
Channel 1	2.17
Channel 2	1.49
Channel 3	0.98
Sum Channel	4.11

Background Noise Metric

	Polgon 1	Polgon 2	Polgon 3	Average
Mean of Sum	0.66	0.98	1.09	0.91
Std. dev. Of Sum	2.15	2.45	2.17	2.26

DGM Quality Control Procedures, Tests and Metric Summary - Supporting Data (Obstructions)

Site: Former Camp Croft, SC
Grid: T18
Prepared By: D. Wolf
Date: 12/10/04

Number of obstructed (effected) lines	29
20% of effected lines	5.8

Line

APPENDIX F4
QC INTRUSIVE RESULTS

1.0 QC OF INTRUSIVE RESULTS

1.0.1 There were two major work phases where intrusive investigation occurred. Phase I took place January 2005 and Phase II January 2006. Quality Control steps taken during each phase are listed below. Anomalies falling outside of these criteria and the failure resolutions are listed in the following tables.

- Table F4-1, Phase I Anomalies Reinvestigated During Phase II: lists anomalies flagged for reinvestigation during Phase I and the findings during Phase II and findings.
- Table F4-2, Phase I Flagged Anomalies: Phase I anomalies falling outside of metrics.
- Table F4-3, Phase II QC of Dig Results: Phase II anomalies flagged for QC because out of metrics or unsatisfactory explanation.
- Table F4-4, Phase II QC of Excavation: Phase II anomalies QC checked with EM61.
- Table 4-5, Phase I Anomalies Identified as No Contacts
- Table 4-6, Priority 1 Anomalies Not Investigated

1.0.2 Following are QC steps taken by the site geophysicist for Intrusive Results during Phase I of Croft I.

- Reacquisition
    - Compared the reacquired magnitudes with the original magnitudes.
        - Examined data to find explanation if reacquired target's magnitude was much different from original target's interpreted magnitude.
    - Calculated the offset of the reacquired target from the original target.
        - Examined data to find explanation if reacquired target was more than 1m away from original.
- Dig Results
    - Compared dig offset with reacquired offset from original target.
        - If more than 1m from original target, QC team rechecked hole and surrounding area.
    - Compared item removed with amplitude of original geophysical anomaly.
        - If it was deemed to not match amplitude, QC team rechecked hole and surrounding area.
    - Compared item removed with target on data map.
        - If it was deemed that item did not match size and shape of target, QC team rechecked hole and surrounding area with EM-61.
    - Random targets were checked by QC team

1.0.3 Following are QC steps taken by the site geophysicist for Intrusive Results during Phase II of Croft I. Several targets flagged during QC of Phase I were reinvestigated during Phase II.

- Reacquisition
    - Compared the reacquired magnitudes with the original magnitudes.
        - Examined data to find explanation if reacquired target's magnitude was much different from original target's interpreted magnitude.

  - Calculated the offset of the reacq target from the original target.
    - Examined data to find explanation if reacq target was more than 18 inches away from orig.
  - If no anomaly was found during reacq, QC team re-checked targets to confirm.
- Dig Results
  - Compared dig offset with reacquired offset from original target.
    - If more than 18 inches from original target, QC team rechecked hole and surrounding area with EM-61.
  - Compared item removed with amplitude of original geophysical anomaly.
    - If it was deemed to not match amplitude, QC team rechecked hole and surrounding area with EM-61.
      - If anomaly still existed near or at target, dig team revisited target with UXO QC present until no anomaly was seen with the EM-61.
  - Compared item removed with target on data map.
    - If it was deemed that item did not match size and shape of target, QC team rechecked hole and surrounding area with EM-61.
      - If anomaly still existed near or at target, dig team revisited target with UXO QC present until no anomaly was seen with the EM-61.
  - Random targets were checked by QC team with the EM-61
    - If anomaly still existed near or at target, dig team revisited target with UXO QC present until no anomaly was seen with the EM-61.

1.1 OUTSTANDING TARGETS

Table 1-1 lists targets that were selected for investigation, but were not investigated (for the reason listed). Some of the targets are QC revisits and others are listed for initial investigation. These anomalies would be good candidates for future investigation, except for the cases were land development occurred.

TABLE 1-1 PRIORITY 1 ANOMALIES NOT INVESTIGATED

TARGET ID	COMMENT
R-19_C35	Not Relocated by PLS
N-21_C32	Not Relocated by PLS - Associated with N-21_44 (0.15826 m)
N-12_C8	Area Developed
N-12_C5	Area Developed
M-22_52	Not Investigated
L-17_C34	No Rights of Entry - Associated with L-17_58 (0.00386 m) Geo Rock during Phase I
L-17_C32	No Rights of Entry - Geo Rock during Phase I
L-17_C31	No Rights of Entry - Associated with M-17_75 (0.30558 m) Geo Rock during Phase I
L-17_C25	No Rights of Entry - Associated with L-17_42 (0.15225 m) Geo Rock during Phase I
L-17_C13	No Rights of Entry - Associated with L-17_16 (0.12644 m) Geo Rock during Phase I

Table 4-1: Phase I Anomalies Reinvestigated During Phase II

Target_ID	Easting, UTMm 17N NAD83	Northing, UTMm 17N NAD83	Local X, ft	Local Y, ft	Channel 1, mV	Chi2 Value	Associate Target	Date Surveyed	Reacqu Channel 1, mV	Reacqu Chi2 Value	Reacqu Offset X, in	Reacqu Offset Y, in	Reacqu Date	Anomaly Type	Weight	Dimensions, in	Comments	Dig Offset X, in
S-17_C9	421367.91	3863384.55	16.50	100.00		4		11/23/04						CD	.25	5 x 3 x .25	aluminum beer can, Deformed	0
S-17_C9	421367.91	3863384.55	16.50	100.00		4		11/23/04						GEO			Hot dirt	
S-17_C3	421363.34	3863376.62	1.50	74.00		9		11/23/04						SA	.25		small arms, 30cal, Oxidized	0
S-17_C3	421363.34	3863376.62	1.50	74.00		9		11/23/04	2.5		0	0	01/18/05	CD	0.25	1 x 0.5	Fragment	4
S-17_C23	421384.37	3863381.80	70.50	91.00		2		11/23/04						NC			checked with em-61	
S-17_C23	421384.37	3863381.80	70.50	91.00		2		11/23/04						GEO		2 x 2 x 1	Geo soil	
S-17_C21	421379.34	3863383.63	54.00	97.00		2		11/23/04						NC			checked with em-61	
S-17_C21	421379.34	3863383.63	54.00	97.00		2		11/23/04						GEO		2 x 2 x 1	Geo soil	
S-17_C19	421376.14	3863380.13	43.50	85.50		2	S-17_133	11/23/04						CD	.25	.25 x .25 x .25	steel shot, Rusted	0
S-17_C19	421376.14	3863380.13	43.50	85.50		2	S-17_133	11/23/04						GEO			GO - 2 x 2 x 1	
S-17_C18	421383.45	3863378.90	67.50	81.50		2		11/23/04						NC			checked with em-61	
S-17_C18	421383.45	3863378.90	67.50	81.50		2		11/23/04	3		0	0	01/18/05	GEO		2 x 2 x 1	Geo soil	
S-17_C17	421393.20	3863384.08	99.50	98.50		2	S-17_10	11/23/04						CD	.25	5 x .25 x .25	nail, Rusted	0
S-17_C17	421393.20	3863384.08	99.50	98.50		2	S-17_10	11/23/04						GEO		2 x 2 x 1	Geo soil	
S-17_C14	421370.65	3863379.67	25.50	84.00		3	S-17_90	11/23/04						CD	.25	3 x 3 x 3	aluminum beer can, Deformed	0
S-17_C14	421370.65	3863379.67	25.50	84.00		3	S-17_90	11/23/04						CD	0.25	0.25 x 0.25 x 0.25	Metal ball	0
S-17_C13	421390.76	3863356.66	91.50	8.50		3	S-17_C17	11/23/04						NC			checked with em-61	
S-17_C13	421390.76	3863356.66	91.50	8.50		3	S-17_C17	11/23/04	2		0	0	01/18/05	NC		2 x 2 x 1	No contact	
S-17_C12	421380.71	3863374.03	58.50	65.50		3	S-17_123	11/23/04						CD	.25	.5 x .5 x .25	dime, Oxidized	0
S-17_C12	421380.71	3863374.03	58.50	65.50		3	S-17_123	11/23/04						GEO	10	12 x 8	Geo rock	
S-17_C1	421367.91	3863382.87	16.50	94.50		10		11/23/04						CD	.25	3 x .25 x .25	wire, Rusted	0
S-17_C1	421367.91	3863382.87	16.50	94.50		10		11/23/04			0	0	01/18/05	CD	0.25	2 x 0.062	Wire brush - 4 pieces - 2 digs	
S-15_C4	421306.97	3863382.43	16.50	93.00		8	S-15_70	11/20/04						CD	.25	5 x 3 x .5	aluminum beer can, Deformed	0
S-15_C4	421306.97	3863382.43	16.50	93.00		8	S-15_70	11/20/04						NC			No contact confirmed during QC	
N-21_38	421503.93	3863279.54	63.00	55.50	16			12/1/04						NC			checked with fisher and Schonstedt	
N-21_38	421503.93	3863279.54	63.00	55.50	16			12/1/04						CD	1		8 Spike	2
M-22_C7	421517.48	3863262.32	7.50	99.00		19	M-22_9	11/30/04						CD	.25	3 x .25 x .25	nails, Rusted	0
M-22_C7	421517.48	3863262.32	7.50	99.00		19	M-22_9	11/30/04						GEO			Surface hot rocks	8
M-22_C59	421526.62	3863251.50	37.50	63.50		2	M-22_36	11/30/04						CD	1	12 x 1 x .25	12 inches of steel, Rusted	5
M-22_C59	421526.62	3863251.50	37.50	63.50		2	M-22_36	11/30/04						GEO			Hot rock	-8
M-22_C52	421523.88	3863256.99	28.50	81.50		2	M-22_59	11/30/04						CD	.25	7 x .25 x .25	barbed wire, Rusted	0
M-22_C52	421523.88	3863256.99	28.50	81.50		2	M-22_59	11/30/04						GEO			Hot rock	
M-22_C50	421518.85	3863255.92	12.00	78.00		2	M-22_101	11/30/04						CD	.25	13 x .25 x .25	wire, Rusted	0
M-22_C50	421518.85	3863255.92	12.00	78.00		2	M-22_101	11/30/04						GEO			Hot rock	
M-22_C49	421519.77	3863254.55	15.00	73.50		2	M-22_104	11/30/04						NC			checked with em-61 still nc	
M-22_C49	421519.77	3863254.55	15.00	73.50		2	M-22_104	11/30/04						GEO			Hot rock	
M-22_C46	421521.60	3863262.17	21.00	98.50		2	M-22_41	11/30/04						CD	.5	16 x .25 x .25	barbed wire, Rusted	0
M-22_C46	421521.60	3863262.17	21.00	98.50		2	M-22_41	11/30/04						GEO			Hot rock	
M-22_C14	421522.97	3863248.15	25.50	52.50		9	M-22_105	11/30/04						NC			Hot Rock for during Phase I - Rechecked and NC	
M-22_C14	421522.97	3863248.15	25.50	52.50		9	M-22_105	11/30/04						GEO			Hot rock	
L-22_C31	421524.33	3863226.83	30.00	82.50		2	L-22_14	11/29/04						CD	.25	4 x .25 x .25	nail, Rusted	0
L-22_C31	421524.33	3863226.83	30.00	82.50		2	L-22_14	11/29/04						GEO			Hot rock	6
L-22_C23	421539.87	3863217.83	81.00	53.00		3		11/29/04						CD	.25	3 x .25 x .25	nail, Rusted	0
L-22_C23	421539.87	3863217.83	81.00	53.00		3		11/29/04						GEO			Hot rock	0
L-22_C21	421521.59	3863215.10	21.00	44.00		3	L-22_42	11/29/04						MD	.25	3 x .75 x .5	fuze, grenade, hand, M10 series, Fuze, Rusted	0
L-22_C21	421521.59	3863215.10	21.00	44.00		3	L-22_42	11/29/04						GEO			Hot rock	-25

Target_ID	Easting, UTMm 17N NAD83	Northing, UTMm 17N NAD83	Local X, ft	Local Y, ft	Channel 1, mV	Chi2 Value	Associate Target	Date Surveyed	Reacqu Channel 1, mV	Reacqu Chi2 Value	Reacqu Offset X, in	Reacqu Offset Y, in	Reacqu Date	Anomaly Type	Weight	Dimensions, in	Comments	Dig Offset X, in
L-22_C16	421536.67	3863216.77	70.50	49.50		3	L-22_20	11/29/04						MD	2	5 x 2.75 x 2.75	grenade, hand, prac, MK2, also found 5ea nails at 14 to 18 inches, Complete, Rusted	-18
L-22_C16	421536.67	3863216.77	70.50	49.50		3	L-22_20	11/29/04						GEO			Hot rocks	0
K-22_C8	421543.52	3863193.15	93.00	72.00		7	K-22_13	11/29/04						CD	.25	.5 x .25 x .25	.5 of a penny, revisit dug to 30 inches , hole still hot, Oxidized	0
K-22_C8	421543.52	3863193.15	93.00	72.00		7	K-22_13	11/29/04						GEO			Hot rock	
K-22_C23	421532.09	3863189.19	55.50	59.00		2	K-22_65	11/29/04						NC			in cart path	
K-22_C23	421532.09	3863189.19	55.50	59.00		2	K-22_65	11/29/04						GEO			Hot rock	
K-22_C10	421515.64	3863201.69	1.50	100.00		6	K-22_30	11/29/04						CD	.25	5 x .25 x .25	large nail, Rusted	0
K-22_C10	421515.64	3863201.69	1.50	100.00		6	K-22_30	11/29/04						GEO			Hot rock	
K-21_C8	421509.08	3863175.34	80.00	13.50		29	K-21_7	11/30/04						NC			dug nothing found	
K-21_C8	421509.08	3863175.34	80.00	13.50		29	K-21_7	11/30/04						NC			No find	

Target_ID	Dig Offset Y, in	Nose Orientation, direction	Nose Inclination, degrees	Depth to Top, in	Depth to Center, in	Photo No.	Dig Date	Team Leader Initials	Hole QC Cleared	Hole QC Initials	Hole QC Date	Geo Agree	Geo Initials	Geo Date
S-17_C9	0	NA	0	6	7	S17_C9 - #005	1/18/06	bam	NA	DRA	2/22/06	YES	RVW	
S-17_C9				12	12		1/27/05	RLF				YES	DRA	2/5/2005
S-17_C3	0					S17_C3 - #007	1/18/06	bam	NA	DRA	2/22/06	YES	RVW	
S-17_C3	-4			6	6		1/20/05	DRG				YES	ALJ	3/5/2005
S-17_C23							1/18/06	bam	YES	TF	1/18/06	NA	DRA	02/22/06
S-17_C23				0	6		1/20/05	DRG				YES	DRA	2/5/2005
S-17_C21							1/18/06	bam	YES	TF	1/18/06	NA	DRA	02/22/06
S-17_C21								DRG				YES	DRA	2/5/2005
S-17_C19	0	NA	0	2	2	S17_C19 - #011	1/18/06	bam	NA	DRA	2/22/06	YES	RVW	
S-17_C19							1/27/05	RLF				YES	DRA	2/5/2005
S-17_C18							1/18/06	bam	YES	TF	1/18/06	NA	DRA	02/22/06
S-17_C18				0	6		1/20/05	DRG				YES	DRA	2/5/2005
S-17_C17	0	NA	90	.25	3	S17_C17 - #009	1/18/06	bam	NA	DRA	2/22/06	YES	RVW	
S-17_C17				0	6		1/20/05	DRG				YES	DRA	2/5/2005
S-17_C14	0	NA	15	2	3	S17_C14 - #008	1/18/06	bam	NA	DRA	2/22/06	YES	RVW	
S-17_C14	10			2	2		1/20/05	DRG				YES	DRA	2/5/2005
S-17_C13							1/18/06	bam	YES	TF	1/18/06	NA	DRA	02/22/06
S-17_C13							1/20/05	DRG				YES	DRA	2/5/2005
S-17_C12	0	NA	0	2	2	S17_C12 - #013	1/18/06	bam	YES	TF	1/30/06	YES	RVW	1/25/06
S-17_C12				12	14		1/20/05	DRG				YES	DRA	2/5/2005
S-17_C1	0	NA	0	4	4	S17_C1 - #012	1/18/06	bam	NA	DRA	2/22/06	YES	RVW	
S-17_C1				0	0.25		1/20/05	DRG				yes	ALJ	3/5/2005
S-15_C4	0	NA	0	3	4	S15_C4 - #002	1/18/06	bam	YES	TF	1/26/06	YES	RVW	1/25/06
S-15_C4							1/25/05	RLF	Yes	HEL	1/24/05	NO	DSW	
N-21_38							1/26/06	rly	YES	TF	1/26/06	NA	DRA	02/22/06
N-21_38	0			2	6		1/11/05	HEL	Yes	HEL	01/2005			
M-22_C7	0	NA	0	3	3	M22_C7 - #042	1/24/06	rly	NA	DRA	2/22/06	YES	RVW	
M-22_C7	-8						1/31/05	RW				NO	AJP	3/5/2005
M-22_C59	-3	NW	0	11	11	M22_C59 - #018/M22_C59a - #027	1/25/06	bam	NA	DRA	2/22/06	YES	RVW	
M-22_C59	0						1/31/05	RW				NO	AJP	3/5/2005
M-22_C52	0	NA	15	5	6	M22_C52 - #022	1/23/06	bam	YES	TF	1/25/06	YES	RVW	1/25/06
M-22_C52				0	0+		1/31/05	RW				NO	AJP	3/5/2005
M-22_C50	0	E	0	5	5	M22_C50 - #020	1/23/06	bam	NA	DRA	2/22/06	YES	RVW	
M-22_C50				0	0+		1/31/05	RW				NO	AJP	3/5/2005
M-22_C49							1/23/06	bam	YES	TF	1/25/06	NA	DRA	02/22/06
M-22_C49				0	0+		1/31/05	RW				NO	AJP	3/5/2005
M-22_C46	0	NW	15	3	3	M22_C46 - #021	1/23/06	bam	NA	DRA	2/22/06	YES	RVW	
M-22_C46				0	0+		1/31/05	RW				NO	AJP	3/5/2005
M-22_C14									NA	DRA	2/22/06	NA	DRA	02/22/06
M-22_C14				0	0+		1/31/05	RW				NO	AJP	3/5/2005
L-22_C31	0	NA	90	0	2	L22_C31 - #012	1/23/06	bam	YES	TF	1/25/06	YES	RVW	1/25/06
L-22_C31	0			0	0+		1/31/05	RW				NO	AJP	3/5/2005
L-22_C23	0	NA	0	3	3	L22_C23 - #012	1/23/06	bam	NA	DRA	2/22/06	YES	RVW	
L-22_C23	-6			2	2+		1/31/05	RW				NO	AJP	3/5/2005
L-22_C21	0	S	0	9	9	L22_C21 - #001	1/23/06	bam	NA	DRA	2/22/06	YES	RVW	
L-22_C21	-25			6	6		1/31/05	RW				NO	AJP	3/5/2005

Target_ID	Dig Offset Y, in	Nose Orientation, direction	Nose Inclination, degrees	Depth to Top, in	Depth to Center, in	Photo No.	Dig Date	Team Leader Initials	Hole QC Cleared	Hole QC Initials	Hole QC Date	Geo Agree	Geo Initials	Geo Date
L-22_C16	-12	W	0	25	26.5	L22_C16 - #024 / L22_C16b - #014	1/25/06	bam	NA	DRA	2/22/06	YES	RVW	
L-22_C16	-6			4	4		1/31/05	RW				NO	AJP	3/5/2005
K-22_C8	0	NA	0	3	3	K22_C8 - #040	1/25/06	bam	YES	TF	1/25/06	YES	RVW	1/25/06
K-22_C8				3	30		1/31/05	RW				NO	AJP	3/5/2005
K-22_C23						K22_C23 - #027	1/30/06	SFR	NA	DRA	2/22/06	NA	DRA	02/22/06
K-22_C23				4			1/31/05	RW				NO	AJP	3/5/2005
K-22_C10	0	NA	75	1	3	K22_C10 - #049	1/18/06	bam	NA	DRA	2/22/06	YES	RVW	
K-22_C10				3	3+		1/31/05	RW				NO	AJP	3/5/2005
K-21_C8							1/30/06	sfr	YES	TF	1/30/06	NA	DRA	02/22/06
K-21_C8							2/1/05	RLF				NO	AJP	3/5/2005

Table F4-2: Phase I Flagged Anomalies

Unique Target ID	Original Survey								Reacquisition Survey					Dig Results									Post-Dig UXO QC Results			Post-Dig Geophysical QC					
											Offset					Offset		Depth (in)													
	Easting Coord. (m)	Northing Coord. (m)	Local X (ft)	Local Y (ft)	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	Associate Target ID	Date	Ch1 Amplitude Response (mV)	Chi^2 Amplitude Response (mV)	X Distance (in)	Y Distance (in)	Date	Anomaly type ***	Approx. weight (lbs)	Dimensions: Length, Width, Height (in)	Comments	X Distance (in)	Y Distance (in)	Top of Item	Center of Mass	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	Original Interpreted Amplitude is not 50% or greater than Reacquisition	Reacquired Target is within 1m of Original Interpreted	Comment
P-14_33	421301.319	3863313.418	98.0	66.5	18.2			12/03/04	8		0	0	01/20/05	CD		12	Wire			3	3	02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06	NO	YES	Pass - Reacqu Amp 50% greater, but low amplitude, original amplitude appropriate response for item
P-14_39	421284.907	3863322.660	44.1	96.8	17.7			12/03/04	6		0	0	01/20/05	CD		0.25 x 0.25 x 2	Metal			2	2	02/01/05	RLF	NA	DRA	02/22/06	YES	DRA	02/21/06	NO	YES	Pass - Reacqu Amp 50% greater, but low amplitude, original amplitude appropriate response for item
N-21_3	421514.169	3863282.783	96.6	66.1	243.0		N-21_C2	12/01/04	102		6	18	01/09/05	CD	2	25	Wire			0	0	01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06	NO	YES	Pass - Large area anomaly (>1x1m), appropriate response
N-12_1	421210.969	3863282.212	1.5	64.0	2416.0		N-12_C1	11/26/04	16		0	0	01/10/05	CD			Bird feeder	0	-36			01/18/05	RLF	Yes	HEL	01/25/05	YES	AJP	3/5/2005	NO	YES	Pass- Large area anomaly, extending out of survey area, investigation reported 36" south of reacqu location
N-22_10	421524.349	3863292.335	30.0	97.5	43.0		N-22_C8	11/30/04	3		-12	0	01/09/05	NC								01/11/05	HEL	Yes	HEL	01/2005	NA	DRA	02/21/06	NO	YES	Anomaly possibly moved
N-22_24	421539.884	3863276.258	81.0	44.8	32.0		N-22_C3	11/30/04	7		30	0	01/09/05	CD	0.1	4	Nail	0	-30	4	6	01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06	NO	YES	Pass - Misreacquired 30" south, appropriate mV item found at original location
P-16_5	421343.057	3863296.192	35.0	10.0	361.0		P-16_C6	11/21/04	40		0	0	01/11/05	CD	4	18 x 8	Weld rods (60 pcs)	0	0	4	4	01/12/05	DRG	NA	DRA	02/22/06	YES	AJP	3/5/2005	NO	YES	Pass - Large Area Anomaly (10x4m), Appropriate Response
P-22_5	421519.093	3863294.469	12.8	4.5	36.0		P-22_C5	11/30/04	5.5		0	0	01/09/05	CD	0.1	6	Nail	0	-6	2	3	01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06	NO	YES	Pass - Original mV Appropriate Response for item, on edge of large anomaly (5x3m)
P-22_6	421518.408	3863295.231	10.5	7.0	33.0			11/30/04	2		-18	24	01/09/05	GEO	5	5 x 5	Rocks	10	0	3	3	01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06	NO	YES	Pass - Original mV Appropriate Response for item, on edge of large anomaly (5x3m)
P-22_9	421517.495	3863299.802	7.5	22.0	3.0			11/30/04	0.5		6	-18	01/09/05	CD	0.5	10	Wire	6	0	2	2	01/11/05	HEL	Yes	HEL	01/2005	YES	DRA	02/21/06	NO	YES	Pass - Reacqu Amp 50% greater, but low amplitude
R-11_16	421186.912	3863332.492	22.5	29.0	12.0		R-11_C6	11/25/04	4		0	0	01/12/05	CD	0.25	2	Wire - mulch pile				1	01/13/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005	NO	YES	Pass - Reacqu Amp 50% greater, but low amplitude
R-19_40	421451.224	3863340.457	90.0	55.4	7.0		R-19_C19	11/29/04	3		0	-12	01/08/05	GEO			Rock				0	01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005	NO	YES	Pass - Reacqu Amp 50% greater, but low amplitude
R-20_1	421478.059	3863352.225	78.0	94.0	1428.0		R-20_C1	11/28/04	3		0	0	01/08/05	CD	0.25	3	Wire rust flakes	0	12	0		01/10/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005	NO	YES	Pass - after further inspection barbed wire loop around tree
R-20_40	421460.532	3863345.522	20.5	72.0	10.0			11/28/04	5		0	0	01/08/05	GEO			Rock				1	01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005	NO	YES	Pass - Reacqu Amp 50% greater, but low amplitude
S-12_8	421235.212	3863354.265	81.0	0.5	8.0			11/21/04	3		0	0	01/10/05	GEO			Rock	12	0			01/18/05	RLF	Yes	HEL	01/19/05	YES	AJP	3/5/2005	NO	YES	Pass - Reacqu Amp 50% greater, but low amplitude
S-16_2	421352.000	3863363.000	64.3	29.3	80.0		S-16_C5	11/20/04	33		0	0	01/13/05	CD	2.5	4 x 2	Mechanical part	0	-8	2.5	3	01/13/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005	NO	YES	Pass - Low, but acceptable given dig offset
S-16_71	421345.250	3863358.500	42.1	14.5	6.0			11/20/04	3		0	0	01/12/05	GEO	0.25	1 x 2	Geo soil			2	3	01/13/05	DRG	Yes	TF	01/26/06	YES	AJP	3/5/2005	NO	YES	Pass - Reacqu Amp 50% greater, but low amplitude
S-19_131	421449.411	3863371.275	84.0	56.5	9.0			11/28/04	3		0	0	01/09/05	NC								01/11/05	RLF	NA	DRA	02/22/06	NA	DRA	02/21/06	NO	YES	Pass - Reacqu Amp 50% greater, but low amplitude
S-19_186	421426.255	3863360.155	8.0	20.0	4.0			11/28/04	2		0	0	01/17/05	NC			1 x 1 x 1 hole					01/19/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005	NO	YES	Pass - Reacqu Amp 50% greater, but low amplitude
S-19_59	421441.163	3863364.172	56.9	33.2	23.0		S-19_C68	11/28/04	10		6	-24	01/17/05	CD			Wire/nail	0	-16			01/18/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005	NO	YES	Pass - Reacqu Amp 50% greater, but low amplitude, original amplitude appropriate response for item
S-19_70	421448.040	3863357.407	79.5	11.0	15.0			11/28/04	3		12	-12	01/17/05	CD			Brick	-12	0	3	4	01/18/05	RLF	NA	DRA	02/22/06	YES	AJP	3/5/2005	NO	YES	Pass - Reaquisition noted washway/creekbed after storm - while original response approriate, original item may have moved
S-20_38	421456.267	3863367.312	6.5	43.5	6.0			11/28/04	3		6	12	01/08/05	GEO			Rock				0	01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005	NO	YES	Pass - Reacqu Amp 50% greater, but low amplitude, original amplitude appropriate response for item
S-20_1	421459.315	3863362.435	16.5	27.5	983.0		S-20_C1	11/28/04	618		60	0	01/08/05	CD	0.5	48	1/2 conduit				0	01/11/05	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005	YES	NO	Pass - Item Reacqu > 1m away, but item 48" long, large area anomaly (5x5m)

Table F4-3: QC of Dig Results

TARG_ID	EASTING	NORTHING	CH1	CHI	QC Date 1	Offset from Reacq 1	Item Matches Anomaly 1	Recheck with EM61 1?	QC Comments 1	QC Date 2	QC Offset 2	Item Matches Anomaly 2	Recheck with EM61 2?	QC Comments 2
K-21_15	421513.6578	3863194.683	17		1/18/06	0	Y	N						
K-21_17	421512.1305	3863180.668	17		1/18/06	0	Y	N						
K-21_8	421512.5858	3863174.196	68		1/18/06	0	Y	N						
K-21_C8	421509.0821	3863175.336		29	1/18/06									
K-22_11	421544.5857	3863200.617	13		1/18/06	0	N	Y	Hot rock	1/25/2006	9	Y	N	
K-22_12	421531.4817	3863192.393	14		1/18/06	0	N	N	Not digging up cart path					
K-22_14	421545.3282	3863183.291	13		1/18/06	0	Y	N						
K-22_15	421542.9703	3863180.423	13		1/18/06	0	Y	N						
K-22_17	421528.4294	3863172.132	11		1/18/06	0	N	N	Not digging up cart path					
K-22_18	421529.0032	3863187.471	11		1/18/06	0	Y	N						
K-22_19	421539.5753	3863180.45	11		1/18/06	0	Y	N						
K-22_26	421545.3253	3863177.334	10		1/18/06	0	Y	N						
K-22_28	421542.6934	3863176.52	9		1/18/06	0	Y	N						
K-22_3	421524.9256	3863172.742	43		1/23/2006	0	Y	N						
K-22_C10	421515.6402	3863201.691		6	1/18/06	0	Y	N						
K-22_C8	421543.5173	3863193.152		7	1/18/06	0	N	Y	Half of a penny	1/25/2006	0	N	N	Dug to max depth.
K-23_4	421546.1031	3863177.612	15		1/18/06	0	Y	N						
K-23_6	421545.6476	3863183.706	13		1/18/06	0	Y	N						
L-22_19	421535.1052	3863221.387	15		1/18/06	0	N	N	Not digging up cart path					
L-22_21	421536.516	3863217.986	14		1/23/2006	0	Y	N						
L-22_22	421545.3383	3863226.083	13		1/23/2006	10	Y	N						
L-22_23	421521.589	3863228.807	12		1/23/2006	0	Y	N						
L-22_25	421533.6188	3863208.237	13		1/23/2006									
L-22_26	421520.9793	3863227.893	12		1/23/2006	0	Y	N						
L-22_27	421541.3927	3863224.079	12		1/23/2006	0	Y	N						
L-22_29	421538.4965	3863217.833	13		1/23/2006	0	Y	N						
L-22_32	421522.0449	3863224.541	9		1/23/2006	0	Y	N						
L-22_36	421523.4148	3863220.275	9		1/23/2006	0	Y	N		1/25/2006	0	Y	N	
L-22_37	421537.947	3863223.4	9		1/25/2006	0	Y	N						
L-22_38	421532.0971	3863214.636	9		1/18/06	0	Y	N						
L-22_39	421530.9234	3863214.825	9		1/18/06	0	Y	N		1/25/2006	11.66190379	Y	N	
L-22_40	421531.1829	3863214.179	8		1/18/06	0	Y	N						
L-22_46	421519.3027	3863224.999	6		1/23/2006	0	Y	N		1/25/2006	0	Y	N	
L-22_54	421536.6696	3863222.709	8		1/18/06	0	N	N	Not digging up cart path					
L-22_69	421544.5926	3863226.211	5		1/23/2006	10	Y	N						
L-22_90	421517.0148	3863214.64	4		1/23/2006	0	N	Y	No Contact					
L-22_C16	421536.668	3863216.768		3	1/23/2006	0	Y	N		1/25/2006	21.63330765	Y	N	
L-22_C21	421521.5853	3863215.096		3	1/23/2006	0	Y	N						
L-22_C23	421539.8676	3863217.833		3	1/23/2006	0	Y	N						
L-22_C31	421524.3307	3863226.826		2	1/23/2006	0	Y	N						
L-23_6	421547.481	3863203.511	14		1/18/06	0	N	Y	14mV part of dime?					
L-23_7	421548.3985	3863216.155	14		1/18/06	0	Y	N						

Table F4-3: QC of Dig Results

TARG_ID	EASTING	NORTHING	CH1	CHI	QC Date 1	Offset from Reacq 1	Item Matches Anomaly 1	Recheck with EM61 1?	QC Comments 1	QC Date 2	QC Offset 2	Item Matches Anomaly 2	Recheck with EM61 2?	QC Comments 2
L-23_8	421552.051	3863202.138	12		1/18/06	0	Y	N						
L-23_9	421549.4652	3863217.221	11		1/18/06	0	Y	N		1/25/2006	0	Y	N	
M-22_11	421545.6606	3863232.152	69		1/23/2006	0	Y	N						
M-22_20	421516.5705	3863262.266	43		1/24/2006	0	N	Y	43mV for nails??					
M-22_34	421523.4245	3863256.381	22		1/23/2006	0	Y	N						
M-22_37	421543.988	3863244.264	18		1/25/2006	9.433981132	Y	N						
M-22_41	421521.5979	3863262.17	17		1/23/2006	0	Y	N						
M-22_43	421526.6227	3863252.267	13		1/23/2006	0	N	Y	No Contact	1/25/2006	7.211102551	Y	N	
M-22_47	421539.8741	3863241.904	12		1/23/2006	0	N	N	Not digging under cart path.					
M-22_51	421540.1776	3863237.79	11		1/23/2006	0	N	N	Not digging under cart path.					
M-22_60	421540.1774	3863237.029	9		1/23/2006	0	N	N	Not digging under cart path.					
M-22_C46	421521.5979	3863262.17		2	1/23/2006	0	Y	N						
M-22_C49	421519.7677	3863254.554		2	1/23/2006	0	N	Y	No Contact					
M-22_C50	421518.854	3863255.925		2	1/23/2006	0	Y	N						
M-22_C52	421523.8817	3863256.99		2	1/23/2006	0	Y	N						
M-22_C59	421526.6225	3863251.505		2	1/23/2006	0	Y	N		1/25/2006	5.830951895	Y	N	
M-22_C7	421517.4846	3863262.324		19	1/24/2006	0	Y	N						
N-21_103	421510.6319	3863273.142	3		1/26/2006	0	Y	N						
N-21_24	421510.7892	3863291.577	40		1/26/2006	0	Y	N						
N-21_25	421511.395	3863278.17	38		1/26/2006	0	Y	N						
N-21_29	421507.1298	3863279.847	27		1/26/2006	0	Y	N						
N-21_30	421513.2224	3863275.122	24		1/26/2006	0	Y	N						
N-21_32	421507.1285	3863275.276	23		1/26/2006	0	Y	N						
N-21_35	421505.4472	3863282.161	19		1/26/2006	0	Y	N						
N-21_37	421504.8447	3863280.152	15		1/26/2006	0	N	Y	No Contact					
N-21_38	421503.9304	3863279.543	16		1/26/2006	0	N	Y	No Contact					
N-21_40	421507.1303	3863281.98	13		1/26/2006	0	Y	N						
N-21_41	421507.1306	3863282.894	13		1/26/2006	0	Y	N						
N-21_46	421506.6738	3863283.656	11		1/26/2006	0	Y	N						
N-21_53	421507.2845	3863288.683	10		1/26/2006	0	Y	N						
N-21_59	421506.6749	3863287.921	9		1/26/2006	0	Y	N						
N-21_74	421507.533	3863278.153	6		1/26/2006	0	Y	N						
N-21_77	421508.5005	3863278.323	5		1/26/2006	0	N	Y	No Contact					
N-21_C10	421509.4151	3863280.303		9	1/26/2006	0	Y	N						
N-21_C11	421512.2029	3863282.771		9	1/26/2006	0	Y	N						
N-21_C12	421511.3948	3863277.256		9	1/26/2006	0	Y	N						
N-21_C13	421510.789	3863290.663		8	1/26/2006	0	Y	N						
N-21_C14	421513.5282	3863279.236		8	1/26/2006	0	Y	N						
N-21_C16	421509.1784	3863290.398		8	1/26/2006	0	Y	N						
N-21_C17	421513.5247	3863266.438		8	1/26/2006	0	Y	N						
N-21_C18	421513.0708	3863277.865		7	1/26/2006	0	Y	N						
N-21_C19	421514.8956	3863265.524		6	1/24/2006	0	Y	N		1/26/2006	0	Y	N	
N-21_C20	421508.0442	3863281.303		5	1/26/2006	0	Y	N						
N-21_C22	421511.4876	3863289.09		4	1/26/2006	0	Y	N						
N-21_C23	421505.9105	3863277.866		4	1/26/2006	0	Y	N						

Table F4-3: QC of Dig Results

TARG_ID	EASTING	NORTHING	CH1	CHI	QC Date 1	Offset from Reacq 1	Item Matches Anomaly 1	Recheck with EM61 1?	QC Comments 1	QC Date 2	QC Offset 2	Item Matches Anomaly 2	Recheck with EM61 2?	QC Comments 2
N-21_C24	421511.2439	3863282.893		4	1/26/2006	0	Y	N						
N-21_C25	421506.7034	3863278.853		4	1/26/2006	0	Y	N						
N-21_C27	421513.0741	3863290.357		4	1/26/2006	0	Y	N						
N-21_C28	421508.5036	3863289.901		3	1/26/2006	0	Y	N						
N-21_C3	421510.5394	3863281.887		25	1/26/2006	0	N	Y	Very large Sum_Signal					
N-21_C30	421506.6759	3863291.578		3	1/24/2006	0	Y	N						
N-21_C31	421512.6139	3863278.626		3	1/26/2006	0	Y	N						
N-21_C33	421508.503	3863287.616		3	1/26/2006	0	Y	N						
N-21_C35	421506.672	3863277.105		3	1/26/2006	0	Y	N						
N-21_C37	421507.5859	3863276.343		3	1/26/2006	0	Y	N						
N-21_C38	421511.9803	3863289.65		3	1/26/2006	0	Y	N						
N-21_C39	421515.0473	3863263.238		3	1/24/2006	0	Y	N		1/26/2006	0	Y	N	
N-21_C46	421513.0696	3863273.751		2	1/26/2006	0	Y	N						
N-21_C47	421514.4392	3863268.114		2	1/24/2006	0	Y	N						
N-21_C48	421505.7591	3863281.675		2	1/26/2006	0	Y	N						
N-21_C49	421506.6753	3863289.445		2	1/26/2006	0	Y	N						
N-21_C50	421503.9311	3863281.98		2	1/26/2006	0	Y	N						
N-21_C52	421514.4451	3863290.052		2	1/26/2006	0	Y	N						
N-21_C53	421507.5887	3863286.855		2	1/26/2006	0	Y	N						
N-21_C57	421509.4165	3863285.483		2	1/26/2006	0	Y	N						
N-21_C58	421504.8451	3863281.98		2	1/26/2006	0	Y	N						
N-21_C8	421508.5008	3863279.542		10	1/26/2006	0	Y	N						
N-21_C9	421507.5896	3863290.206		10	1/26/2006	0	Y	N						
N-22_15	421523.4264	3863262.627	30		1/23/2006	0	Y	N						
N-22_18	421515.2009	3863267.961	21		1/24/2006	0	Y	N						
N-22_22	421516.1146	3863266.438	22		1/24/2006	0	N	Y	No Contact					
N-22_28	421521.453	3863289.289	14		1/23/2006	0	Y	N						
N-22_32	421520.2283	3863267.39	11		1/24/2006	0	Y	N						
N-22_34	421527.0904	3863290.963	10		1/23/2006	0	Y	N						
N-22_42	421515.2062	3863287.614	9		1/26/2006	0	Y	N						
N-22_56	421516.5765	3863284.278	5		1/26/2006	0	N	N	Checked immediately					
N-22_66	421521.1481	3863288.375	5		1/23/2006	0	Y	N						
N-22_C1	421517.9418	3863262.781		23	1/24/2006	0	Y	N						
N-22_C13	421522.9725	3863274.51		5	1/23/2006	0	Y	N						
N-22_C17	421515.6577	3863267.032		4	1/24/2006	0	Y	N						
N-22_C18	421520.0752	3863264.304		4	1/23/2006	0	Y	N						
N-22_C2	421515.2003	3863265.524		19	1/24/2006	0	Y	N		1/26/2006	0	Y	N	
N-22_C22	421523.5791	3863263.846		3	1/23/2006	0	Y	N						
N-22_C24	421520.2416	3863288.637		3	1/23/2006	0	Y	N						
N-22_C25	421517.4521	3863284.458		3	1/26/2006	0	N	N	Checked immediately					
N-22_C27	421517.9432	3863267.656		3	1/24/2006	0	N	N	Item left in place. Deeper than required depth.	1/26/2006	0	N	N	Past max depth, checked immediately
N-22_C28	421540.3392	3863269.783		2	1/23/2006	0	Y	N						

Table F4-3: QC of Dig Results

TARG_ID	EASTING	NORTHING	CH1	CHI	QC Date 1	Offset from Reacq 1	Item Matches Anomaly 1	Recheck with EM61 1?	QC Comments 1	QC Date 2	QC Offset 2	Item Matches Anomaly 2	Recheck with EM61 2?	QC Comments 2
N-22_C31	421521.5985	3863263.846		2	1/23/2006	0	Y	N						
N-22_C34	421517.9479	3863285.328		2	1/26/2006	0	N	N	Checked immediately					
N-22_C37	421522.5142	3863269.788		2	1/26/2006	0	N	Y	No Contact					
N-22_C38	421519.7709	3863265.98		2	1/26/2006	0	Y	N						
N-22_C6	421524.2397	3863288.325		9	1/26/2006	0	N	N	Past max depth.					
P-15_C10	421320.2097	3863313.261		7	1/18/06	0	Y	N						
P-15_C15	421315.6357	3863300.008		5	1/18/06	0	Y	N						
P-15_C7	421319.1546	3863312.919		8	1/18/06	0	Y	N						
P-21_11	421503.477	3863302.856	15		1/24/2006	18.35755975	Y	Y	More than 18in offset					
P-21_6	421514.0044	3863302.675	24		1/24/2006	0	N	Y	Hotrock					
P-21_9	421498.4496	3863302.857	18		1/24/2006	34	Y	Y	More than 18in offset					
P-21_C6	421499.9837	3863301.893		3	1/24/2006	0	Y	N						
P-21_C9	421508.5045	3863304.378		2	1/24/2006	0	Y	N						
P-22_C6	421517.4952	3863301.478		2	1/30/2006	0	Y	N						
R-12_C10	421226.5219	3863332.787		6	1/18/06	0	Y	N						
R-12_C6	421229.7202	3863329.129		33	1/18/06	0	Y	N						
R-13_C23	421258.3633	3863336.434		2	1/18/06	0	Y	N						
R-13_C26	421250.5921	3863330.647		2	1/18/06	0	Y	N						
R-19_C23	421446.2086	3863344.458		3	1/24/2006	0	Y	N						
R-20_31	421464.4962	3863353.748	12		1/23/2006	0	Y	N						
R-20_33	421457.5505	3863340.117	12		1/24/2006	0	Y	N						
R-20_54	421459.3363	3863352.792	8		1/23/2006	0	Y	N						
S-13_C24	421254.714	3863362.182		3	1/18/06	0	Y	N						
S-15_C4	421306.9742	3863382.43		8	1/18/06	0	Y	N						
S-17_C1	421367.9129	3863382.87		10	1/18/06	0	Y	N						
S-17_C12	421380.7076	3863374.031		3	1/18/06	0	N	Y	dime is too small					
S-17_C13	421390.7578	3863356.661		3	1/18/06	0	N	Y	Checked with EM61 immediately					
S-17_C14	421370.6543	3863379.67		3	1/18/06	0	Y	N						
S-17_C17	421393.2027	3863384.082		2	1/18/06	0	Y	N						
S-17_C18	421383.4512	3863378.905		2	1/18/06	0	N	Y	Checked with EM61 immediately					
S-17_C19	421376.1389	3863380.126		2	1/18/06	0	Y	N						
S-17_C2	421372.9372	3863371.138		10	1/18/06	0	N	Y	penny is too small					
S-17_C21	421379.3391	3863383.629		2	1/18/06	0	N	Y	Checked with EM61 immediately					
S-17_C23	421384.366	3863381.799		2	1/18/06	0	N	Y	Checked with EM61 immediately					
S-17_C3	421363.3408	3863376.625		9	1/18/06	0	Y	N						
S-17_C9	421367.9133	3863384.546		4	1/18/06	0	Y	N						
S-18_C18	421404.3177	3863360.618		2	1/18/06	0	Y	N						

Table F4-3: QC of Dig Results

TARG_ID	EASTING	NORTHING	CH1	CHI	QC Date 1	Offset from Reacq 1	Item Matches Anomaly 1	Recheck with EM61 1?	QC Comments 1	QC Date 2	QC Offset 2	Item Matches Anomaly 2	Recheck with EM61 2?	QC Comments 2
S-19_104	421433.4185	3863378.59	10		1/25/2006	0	Y	N						
S-19_105	421445.976	3863357.664	10		1/24/2006	0	Y	N						
S-19_108	421447.4527	3863373.026	9		1/25/2006	0	Y	N						
S-19_111	421432.2001	3863378.742	10		1/25/2006	0	Y	N						
S-19_151	421435.2452	3863372.038	4		1/25/2006	0	Y	N						
S-19_179	421443.9264	3863359.389	4		1/24/2006	0	Y	N						
S-19_187	421442.5565	3863370.513	8		1/25/2006	0	Y	N						
S-19_249	421445.755	3863365.484	3		1/24/2006	0	Y	N						
S-19_35	421447.7347	3863356.341	28		1/24/2006	0	Y	N						
S-19_37	421433.5685	3863365.791	25		1/24/2006	0	Y	N						
S-19_39	421453.0668	3863358.016	31		1/24/2006	0	Y	N						
S-19_43	421441.7369	3863356.484	28		1/24/2006	0	Y	N						
S-19_56	421432.9598	3863368.991	19		1/25/2006	0	Y	N						
S-19_63	421444.3833	3863357.713	18		1/24/2006	0	Y	N						
S-19_68	421448.8012	3863358.474	13		1/24/2006	0	Y	N						
S-19_73	421434.3324	3863378.285	16		1/25/2006	0	Y	N						
S-19_75	421433.7927	3863377.923	15		1/25/2006	0	Y	N						
S-19_76	421448.6489	3863359.388	13		1/24/2006	0	Y	N						
S-19_78	421434.4846	3863377.523	14		1/25/2006	0	Y	N						
S-19_80	421442.0948	3863363.317	16		1/24/2006	0	Y	N						
S-19_81	421442.4045	3863373.713	15		1/25/2006	0	Y	N						
S-19_84	421436.1582	3863366.248	13		1/24/2006	0	Y	N						
S-19_85	421440.2714	3863368.685	11		1/25/2006	0	Y	N						
S-19_94	421438.8525	3863372.793	8		1/25/2006	0	Y	N						
S-19_C14	421452.9488	3863357.692		12	1/25/2006	0	Y	N						
S-19_C15	421440.7273	3863359.085		12	1/24/2006	0	Y	N						
S-19_C21	421440.2706	3863361.676		10	1/24/2006	0	Y	N						
S-19_C24	421449.8676	3863358.017		8	1/24/2006	0	Y	N						
S-19_C25	421450.9514	3863358.036		8	1/24/2006	0	Y	N						
S-19_C26	421439.5146	3863371.334		8	1/25/2006	0	Y	N						
S-19_C28	421423.8383	3863374.338		8	1/25/2006	0	Y	N						
S-19_C34	421454.063	3863358.067		6	1/24/2006	0	Y	N						
S-19_C35	421435.2443	3863366.4		6	1/24/2006	0	Y	N						
S-19_C36	421443.0452	3863358.124		6	1/24/2006	0	Y	N						
S-19_C37	421453.0668	3863356.339		6	1/24/2006	0	Y	N						
S-19_C4	421426.5589	3863355.889		23	1/25/2006	0	N	N	Checked immediately					
S-19_C40	421435.2442	3863365.943		5	1/24/2006	0	Y	N						
S-19_C46	421431.2096	3863371.722		4	1/25/2006	0	Y	n						
S-19_C48	421449.0794	3863357.58		4	1/24/2006	0	Y	N						
S-19_C53	421453.2155	3863354.269		4	1/24/2006	0	Y	N						
S-19_C56	421442.5531	3863374.112		4	1/25/2006	0	Y	N						
S-19_C58	421427.0191	3863369.296		3	1/25/2006	0	Y	N						
S-19_C60	421432.351	3863371.733		3	1/25/2006	0	Y	N						
S-19_C61	421443.0635	3863358.854		3	1/24/2006	0	Y	N						
S-19_C62	421423.8182	3863361.679		3	1/25/2006	0	N	N	Checked immediately					
S-19_C65	421426.2761	3863369.446		3	1/25/2006	0	Y	N						

Table F4-3: QC of Dig Results

TARG_ID	EASTING	NORTHING	CH1	CHI	QC Date 1	Offset from Reacq 1	Item Matches Anomaly 1	Recheck with EM61 1?	QC Comments 1	QC Date 2	QC Offset 2	Item Matches Anomaly 2	Recheck with EM61 2?	QC Comments 2
S-19_C67	421440.6084	3863373.62		3	1/25/2006	0	Y	N						
S-19_C72	421450.516	3863354.4		3	1/24/2006	0	Y	N						
S-19_C74	421445.2978	3863363.504		3	1/24/2006	0	Y	N						
S-19_C76	421441.1849	3863372.531		2	1/25/2006	0	Y	N						
S-19_C81	421427.933	3863368.687		2	1/25/2006	0	Y	N						
S-19_C85	421443.4836	3863364.347		2	1/24/2006	0	Y	N						
S-19_C9	421453.2648	3863359.94		18	1/24/2006	0	Y	N						
S-19_C97	421439.815	3863373.104		2	1/25/2006	0	Y	N						
S-20_22	421457.0287	3863357.863	19		1/23/2006	0	Y	N						
S-20_28	421462.2103	3863359.844	15		1/23/2006	0	Y	N						
S-20_32	421462.1529	3863357.085	13		1/23/2006	0	Y	N						
S-20_33	421456.5994	3863359.074	11		1/24/2006	0	Y	N						
S-20_36	421461.1346	3863356.051	9		1/23/2006	0	Y	N						
S-20_C10	421455.6939	3863360.079		8	1/24/2006	0	Y	N						
S-20_C12	421458.9094	3863364.957		7	1/23/2006	0	Y	N						
S-20_C15	421455.1999	3863361.521		6	1/24/2006	0	Y	N						
S-20_C19	421459.3147	3863360.606		4	1/23/2006	0	Y	N						
S-20_C20	421454.2855	3863358.473		4	1/24/2006	0	Y	N						
S-20_C28	421477.6027	3863355.577		3	1/30/2006	0	Y	N						
S-20_C3	421458.1786	3863363.112		20	1/30/2006	0	Y	N						
S-20_C30	421457.9431	3863359.692		3	1/23/2006	0	Y	N						
S-20_C31	421460.8387	3863362.283		3	1/23/2006	0	Y	N						
S-20_C38	421457.4859	3863360.301		2	1/23/2006	0	Y	N						
S-20_C5	421457.9594	3863364.537		19	1/23/2006	0	Y	N						
S-20_C7	421456.5715	3863360.149		15	1/24/2006	0	Y	N						
S-20_C9	421456.1143	3863360.606		11	1/23/2006	0	Y	N						
T-16_C11	421354.3561	3863390.643		2	1/18/06	0	Y	N						
T-16_C14	421361.6705	3863397.04		2	1/18/06	0	N	N	Checked with EM61 immediately					
T-16_C6	421350.6982	3863384.551		4	1/18/06	0	Y	N						
T-17_C15	421390.7653	3863392.922		4	1/18/06	0	N	N	Checked with EM61 immediately					
T-17_C30	421377.5112	3863399.783		2	1/18/06	0	Y	N						
T-17_C5	421384.8238	3863401.458		7	1/18/06	0	Y	N						

Table F4-4: QC of Anomaly Excavation

TARG_ID	EASTING	NORTHING	CH1	CHI	Reason Investigated	Date Qced	QC CH1	QC Chi	QC X	QC Y	QC Actions
T-17_C15	421390.77	3863392.922		4	No Contact	1/18/2006	N/C				N/C
T-16_C14	421361.67	3863397.04		2	No Contact	1/18/2006	N/C				N/C
S-20_C3	421458.18	3863363.112		20	Random	1/30/2006	N/C				N/C
S-17_C23	421384.37	3863381.799		2	No Contact	1/18/2006	N/C				N/C
S-17_C21	421379.34	3863383.629		2	No Contact	1/18/2006	N/C				N/C
S-17_C2	421372.94	3863371.138		10	penny is too small	1/30/2006	N/C				N/C
S-17_C18	421383.45	3863378.905		2	No Contact	1/18/2006	N/C				N/C
S-17_C13	421390.76	3863356.661		3	No Contact	1/18/2006	N/C				N/C
S-17_C12	421380.71	3863374.031		3	dime is too small	1/30/2006	N/C				N/C
R-20_C7	421458.86	3863347.655		8	Random	1/30/2006	N/C				N/C
P-22_C6	421517.5	3863301.478		2	Random	1/30/2006	N/C				N/C
P-21_9	421498.45	3863302.857	18		More than 18in offset	1/26/2006	N/C				N/C
P-21_6	421514	3863302.675	24		Hotrock	1/26/2006	Nail in Tree				Nail in Tree
P-21_11	421503.48	3863302.856	15		More than 18in offset	1/26/2006	N/C				N/C
K-21_C8	421509.08	3863175.336		29	Random	1/30/2006	N/C				N/C

Table 4-5: Phase I Anomalies Identified as No Contact

anomaly_id	associate	fSignal_Sq	SNR	max_amp	_max	description	type	ordnance_type	reacq_date	dig_date	QC Comment
K-21_C8	K-21_7			29	0	Same as K-21_7 (0.38451 m)	NC			2/1/2005	Revisited Location
M-18_C1				98		Culture Reacq-trailer 2'x2'x1' Hole	NC		1/22/2005	1/26/2005	Reaqu: Trailer
N-16_C21	N-16_210			3	13	Same as N-16_210 (0.00039 m) No contact, 2x2x1 hole	NC		1/22/2005	1/26/2005	NC, Low mV
N-16_C35	N-16_186			3	15	Same as N-16_186 (0.30153 m) No contact, 2x2x1 hole	NC		1/22/2005	1/26/2005	NC, Low mV
N-16_C41	N-16_167			2	2	Same as N-16_167 (0.30141 m) No contact, 2x2x1 hole	NC		1/22/2005	1/26/2005	NC, Low mV
N-22_10	N-22_C8	26866	1037	43	3	Same as N-22_C8 (0.08539 m)	NC		1/9/2005	1/11/2005	NC, Anomaly Possibly Moved
N-22_6	N-22_C5	64711	3282	64	0	Same as N-22_C5 (0.07609 m)	NC		1/9/2005	1/11/2005	Reacqu: NC
N-22_72		176	23	4	2.5		NC		1/9/2005	1/11/2005	NC, Low mV
P-12_C38	P-12_118			2	4	Same as P-12_118 (0.0058 m) 2X2X2 HOLE	NC		1/20/2005	1/24/2005	NC, Low mV
P-13_C21				3	0	2X2X1 LOG	NC			1/31/2005	NC, Low mV
P-13_C24				3	0	FENCE NEARBY	NC			1/31/2005	Fence Nearby
P-13_C39				2	0	2X2X1' HOLE DUG - LOG FOUND	NC			1/31/2005	NC, Low mV
R-12_28		2930	112	8	21		NC		1/12/2005	1/13/2005	NC, Low mV
R-13_131		3462	280	9	4	Road	NC		1/12/2005	11/30/1999	Road
R-13_198		11296	381	10	10		NC		1/12/2005	1/17/2005	NC, Low mV
R-13_24		64214	2265	25	35		NC		1/12/2005	1/17/2005	NC, R-13_24, 9, 18 all within 1x2.5m large area anom, 3 hotrocks found
R-13_28		56733	1841	28	10		NC		1/12/2005	1/17/2005	NC, within apparent geologic response area, 2m north of a nail
R-13_38		13473	496	19	3		NC		1/12/2005	1/17/2005	NC, low mV small stripe on map, within apparent geologic long strip
R-13_79		9947	350	14	14		NC		1/12/2005	1/17/2005	NC, within apparent geologic long strip
R-17_119		264	20	4	2	Fringe	NC		1/17/2005	2/2/2005	Revisited Location
R-17_23		977	158	10		Reaq: No Contact	NC		1/17/2005	11/30/1999	Reacqu: NC
R-18_C3	R-18_13			3	5	Same as R-18_13 (0.43894 m) 2'x2'x1' Hole	NC		1/18/2005	1/20/2005	NC, 27 inches from R-18_C2, likely same source
S-12_18		1885	66	5	0	1'x1'x1' Hole	NC			1/18/2005	NC, Low mV
S-13_C26				3	0	2'x2'x1' Hole	NC			1/24/2005	NC, Low mV
S-13_C27	S-13_42			2	0	Same as S-13_42 (0.42489 m) 2'x2'x1' Hole	NC			1/24/2005	NC, Low mV
S-13_C7	S-13_21			9	0	Same as S-13_21 (0.00437 m) 2'x2'x1' Hole	NC			1/20/2005	NC, Low mV
S-14_C22				3	0	2'x2'x1' Hole	NC			1/25/2005	NC, Low mV
S-14_C35	S-14_158			2	0	Same as S-14_158 (0.34087 m) 2'x2'x1' Hole	NC			1/25/2005	NC, Low mV
S-15_C4	S-15_70			8	0	Same as S-15_70 (0.09191 m) 9999	NC			1/25/2005	NC, Low mV
S-16_C17	S-16_244			3	0	Same as S-16_244 (0.01268 m) 2'x2'x1' Hole	NC			1/25/2005	NC, Low mV
S-16_C18	S-16_136			3	0	Same as S-16_136 (0.22472 m) 2'x2'x2' Hole	NC			1/25/2005	NC, Low mV
S-17_C17	S-17_10			2	0	Same as S-17_10 (0.2452 m) (Team Leader made mistake and switched data for S-17 C_17 and C_13 on dig sheet. This version contains fixed data per note on sheet)2'x2'x1' Hole	NC			1/20/2005	Revisited Location
S-18_16		1102	88	8	4	non ferrous	NC		1/8/2005	1/12/2005	NC, Low mV
S-18_2		1626507	62861	186	390	non ferrous	NC		1/8/2005	1/12/2005	NC, Anomaly Possibly Moved
S-18_4		228658	8435	84	88	non ferrous	NC		1/8/2005	1/12/2005	NC, Anomaly Possibly Moved
S-18_9		11358	708	40		non ferrous Reaq: Soda Can	NC		1/8/2005	1/12/2005	Reacqu: Soda Can
S-19_131		2129	132	9	3	9999	NC		1/9/2005	1/11/2005	NC, Low mV
S-19_132		1067	61	6	6	9999	NC		1/9/2005	1/11/2005	NC, Low mV

anomaly_id	associate	fSignal_Sq	SNR	max_amp	_max	description	type	ordnance_type	reacq_date	dig_date	QC Comment
S-19_144		1917	103	8	3	9999	NC		1/9/2005	1/11/2005	NC, Low mV
S-19_149		930	41	5	3	9999	NC		1/9/2005	1/11/2005	NC, Low mV
S-19_186		137	27	4	2	1'x1'x1' hole	NC		1/17/2005	1/19/2005	NC, Low mV
S-19_214		137	21	3	2	1'x1'x1' hole	NC		1/17/2005	1/19/2005	NC, Low mV
S-19_227		303	26	2	2	1'x1'x1' hole	NC		1/17/2005	1/19/2005	NC, Low mV
T-18_43		1800	63	5	5	NO CONTACT	NC		1/11/2005	1/17/2005	NC, Low mV

Table F4-6: Priority 1 Anomalies Not Investigated

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
K-21_22		421509.236	3863182.344	1858	74	6	
K-21_26		421510.303	3863182.039	1971	69	6	
K-21_27		421512.130	3863178.535	1777	130	4	
K-22_16		421524.320	3863186.149	2110	106	12	
K-22_20		421525.689	3863179.293	1917	91	10	
K-22_21		421526.152	3863201.103	1744	156	9	
K-22_23		421545.345	3863201.634	1876	168	9	
K-22_24		421537.163	3863174.216	2405	88	10	
K-22_25		421539.027	3863198.208	2532	92	10	
K-22_34		421534.377	3863195.440	2448	94	8	
K-22_35		421536.656	3863172.282	2041	109	7	
K-22_36		421534.530	3863196.201	1978	84	8	
K-22_39		421544.580	3863177.612	2258	75	7	
K-22_40		421536.199	3863171.520	1897	127	5	
K-22_42		421532.701	3863195.288	2024	67	6	
K-22_44		421540.162	3863179.289	2253	101	7	
K-23_8		421549.763	3863189.951	1931	91	11	
L-22_34		421537.580	3863207.627	2142	91	10	
L-22_47		421542.036	3863204.758	2672	98	7	
L-22_50		421537.127	3863222.100	2012	95	7	
L-22_57		421544.743	3863219.812	1868	62	7	
L-22_60		421542.519	3863205.310	2080	76	6	
L-22_61		421540.325	3863218.747	1827	63	7	
L-22_72		421536.667	3863214.726	2001	73	6	
L-22_80		421539.563	3863218.747	1711	62	6	
M-22_102		421524.335	3863242.365	1950	87	4	
M-22_65		421516.569	3863255.164	2114	81	9	
M-22_73		421522.968	3863256.990	1728	116	8	
M-22_74		421524.334	3863238.370	1761	83	7	
M-22_85		421525.248	3863238.251	2189	76	5	
N-15_152		421326.071	3863292.451	2166	125	7	
N-15_66		421327.821	3863290.559	23693	800	25	
N-15_88		421328.887	3863289.036	11970	441	17	
N-16_100		421353.416	3863292.689	2192	93	11	
N-16_111		421339.704	3863292.543	2035	149	17	
N-16_129		421339.857	3863291.939	3338	180	12	
N-16_156		421351.587	3863291.181	4976	167	6	
N-16_172		421352.501	3863291.332	2008	77	6	
N-16_200		421341.989	3863289.073	1994	161	3	
N-16_24		421335.134	3863290.734	511056	18033	101	
N-16_27		421337.114	3863291.337	187583	6343	64	
N-16_33		421347.931	3863292.238	25903	2335	48	
N-16_39		421338.638	3863292.543	50845	2578	37	
N-16_45		421341.532	3863290.430	46108	1626	32	
N-16_46		421338.638	3863291.789	54699	2219	29	
N-16_48		421348.388	3863292.842	26955	2734	30	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
N-16_51		421338.942	3863290.431	67572	2611	31	
N-16_52		421341.075	3863290.883	44347	1713	28	
N-16_53		421341.989	3863291.033	35178	1359	27	
N-16_55		421348.235	3863290.428	12784	647	23	
N-16_65		421347.017	3863292.390	3833	443	20	
N-16_78		421338.790	3863289.526	12117	545	17	
N-16_83		421347.474	3863292.993	10939	1109	13	
N-21_56		421507.594	3863274.168	1850	115	9	
N-21_64		421512.160	3863289.139	2007	73	9	
N-21_C32		421509.012	3863284.537				3
N-22_10	N-22_C8	421524.348	3863292.335	26866	1037	43	
N-22_55		421527.471	3863291.572	2260	86	4	
N-22_85		421526.020	3863275.881	1836	61	5	
P-11_55		421208.537	3863303.541	1944	74	5	
P-12_100		421211.735	3863298.817	3394	119	8	
P-12_101		421229.868	3863311.152	3897	126	9	
P-12_102		421210.518	3863303.693	2099	105	7	
P-12_103		421216.004	3863311.156	1851	149	9	
P-12_104		421222.783	3863308.184	2993	109	8	
P-12_105		421237.488	3863321.662	3120	157	10	
P-12_106		421240.230	3863319.529	5480	221	7	
P-12_108		421233.372	3863312.218	3763	160	7	
P-12_109		421223.161	3863299.576	3676	135	8	
P-12_11		421212.804	3863308.720	56402	2080	33	
P-12_111		421238.401	3863318.311	6060	223	9	
P-12_112		421216.002	3863302.473	2854	109	7	
P-12_113		421214.173	3863299.731	3153	159	7	
P-12_114		421226.056	3863299.727	3271	125	5	
P-12_117		421218.742	3863294.550	2611	95	7	
P-12_118		421225.144	3863306.736	2512	88	6	
P-12_12		421215.546	3863308.414	33364	1230	34	
P-12_120		421224.839	3863307.345	1881	75	5	
P-12_121		421221.943	3863300.109	1883	79	6	
P-12_122		421237.943	3863313.283	5372	189	8	
P-12_123		421221.791	3863301.100	1790	84	5	
P-12_125		421230.173	3863314.199	5109	187	9	
P-12_126		421219.200	3863298.968	2187	84	7	
P-12_127		421212.345	3863299.427	3054	112	7	
P-12_128		421232.457	3863309.933	4071	143	7	
P-12_13		421211.891	3863310.853	31436	1108	33	
P-12_130		421216.916	3863302.168	4475	157	7	
P-12_132		421223.009	3863300.185	3992	146	7	
P-12_134		421221.945	3863307.194	2778	101	6	
P-12_136		421224.228	3863299.119	3835	221	10	
P-12_138		421210.517	3863298.970	2332	125	6	
P-12_139		421221.487	3863306.584	1780	65	5	
P-12_141		421219.660	3863309.632	3658	128	7	
P-12_142		421218.896	3863301.405	5672	199	7	
P-12_143		421224.231	3863310.240	2330	89	7	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
P-12_144		421238.856	3863311.607	3769	138	7	
P-12_146		421211.889	3863304.454	2186	80	7	
P-12_149		421218.291	3863318.621	2360	105	6	
P-12_15		421212.805	3863310.395	25810	951	30	
P-12_150		421217.524	3863296.683	3839	124	7	
P-12_153		421226.974	3863314.200	3357	117	6	
P-12_154		421219.203	3863310.698	2665	107	7	
P-12_155		421221.486	3863301.709	1766	74	5	
P-12_156		421212.802	3863299.960	2421	88	7	
P-12_158		421220.115	3863303.081	1831	73	7	
P-12_160		421236.113	3863307.190	2021	77	6	
P-12_161		421217.981	3863299.425	1854	64	4	
P-12_163		421236.722	3863307.266	2858	100	6	
P-12_164		421230.936	3863318.998	2555	108	5	
P-12_165		421224.609	3863301.556	2245	100	5	
P-12_17		421237.945	3863322.729	13083	505	32	
P-12_171		421231.085	3863307.191	1732	63	6	
P-12_175		421224.228	3863300.642	4359	167	9	
P-12_181		421226.517	3863314.810	2612	91	5	
P-12_183		421228.803	3863316.333	1733	69	6	
P-12_184		421239.923	3863311.531	2168	87	4	
P-12_185		421210.517	3863300.646	1775	89	4	
P-12_189		421225.831	3863314.429	2577	83	5	
P-12_19		421234.285	3863308.104	17282	667	34	
P-12_191		421223.314	3863302.166	2231	106	6	
P-12_195		421238.400	3863312.521	3110	114	6	
P-12_197		421231.697	3863314.884	1816	77	4	
P-12_199		421239.314	3863313.892	2379	87	6	
P-12_2		421210.520	3863312.072	316275	17112	100	
P-12_201		421216.765	3863307.804	2023	90	3	
P-12_203		421223.771	3863301.099	5093	187	7	
P-12_206		421231.086	3863311.000	2069	79	6	
P-12_209		421218.899	3863312.070	2603	116	4	
P-12_21		421240.688	3863323.185	7720	569	26	
P-12_210		421236.115	3863316.026	3860	148	6	
P-12_212		421239.772	3863317.091	2812	108	7	
P-12_214		421219.662	3863315.269	5806	470	5	
P-12_22		421231.088	3863317.703	20603	726	32	
P-12_221		421239.315	3863317.549	2370	91	2	
P-12_229		421224.918	3863315.267	1725	49	4	
P-12_23		421240.990	3863316.506	3732	378	15	
P-12_232		421235.659	3863319.530	2553	89	6	
P-12_253		421220.115	3863300.339	1854	93	3	
P-12_28		421239.011	3863320.900	14618	592	23	
P-12_29		421227.581	3863307.497	17531	546	22	
P-12_3		421211.434	3863312.376	155287	5728	68	
P-12_32		421235.809	3863311.455	34627	1170	21	
P-12_33		421232.002	3863316.027	52041	1835	21	
P-12_34		421214.936	3863304.301	7446	287	24	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
P-12_35		421210.515	3863293.181	6655	599	22	
P-12_36		421238.403	3863323.643	4871	438	21	
P-12_38		421211.886	3863294.095	14657	565	24	
P-12_4		421212.347	3863308.110	84019	3099	55	
P-12_40		421239.316	3863322.576	6519	264	16	
P-12_41		421234.745	3863317.702	15084	531	16	
P-12_43		421230.022	3863317.551	20117	652	18	
P-12_45		421236.724	3863313.131	25879	839	16	
P-12_47		421218.748	3863317.173	26885	948	17	
P-12_5		421232.764	3863315.722	75151	2540	43	
P-12_51		421235.660	3863321.206	8246	393	16	
P-12_52		421239.773	3863320.443	14824	546	19	
P-12_53		421211.433	3863308.263	7772	299	16	
P-12_55		421237.487	3863318.463	16908	596	19	
P-12_57		421240.230	3863322.728	10679	393	17	
P-12_59		421234.745	3863318.464	17149	604	13	
P-12_6		421222.861	3863314.811	73880	2725	52	
P-12_61		421215.243	3863313.213	9348	398	13	
P-12_63		421232.003	3863318.312	9115	321	19	
P-12_64		421236.573	3863317.092	14504	511	17	
P-12_65		421221.186	3863319.229	5022	162	12	
P-12_66		421215.315	3863298.055	10441	352	10	
P-12_67		421212.880	3863307.120	8914	425	13	
P-12_68		421237.487	3863316.940	10409	401	17	
P-12_7		421213.871	3863310.090	58673	2069	37	
P-12_70		421221.946	3863311.612	7598	279	13	
P-12_71		421222.403	3863310.697	6543	252	11	
P-12_72		421221.032	3863313.592	8212	289	13	
P-12_73		421214.175	3863306.586	3502	128	11	
P-12_74		421240.839	3863321.204	3604	265	13	
P-12_75		421238.859	3863320.139	10508	387	16	
P-12_77		421234.742	3863309.932	10073	354	11	
P-12_78		421224.993	3863312.068	10927	354	11	
P-12_79		421217.523	3863295.007	7499	289	12	
P-12_8		421219.662	3863316.183	35499	1440	44	
P-12_80		421237.944	3863319.072	12099	426	11	
P-12_81		421228.037	3863303.688	2827	114	8	
P-12_82		421234.746	3863323.644	2568	231	13	
P-12_83		421232.458	3863311.761	5937	209	12	
P-12_85		421221.487	3863303.537	2489	100	8	
P-12_86		421234.285	3863309.323	7857	398	12	
P-12_89		421234.743	3863311.608	8478	298	9	
P-12_9		421225.753	3863304.755	18735	723	33	
P-12_90		421229.259	3863314.504	8209	302	12	
P-12_91		421229.259	3863313.895	10658	359	12	
P-12_95		421239.468	3863318.767	6916	233	9	
P-12_96		421235.656	3863309.895	9674	340	12	
P-12_97		421220.572	3863301.100	4456	163	9	
P-12_98		421222.557	3863317.401	3096	125	8	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
P-12_99		421233.983	3863317.702	13920	451	11	
P-14_105		421286.087	3863323.172	1992	114	9	
P-14_108		421297.968	3863316.314	5487	211	10	
P-14_109		421291.874	3863317.382	6090	197	10	
P-14_111		421299.034	3863315.856	5955	200	10	
P-14_119		421299.339	3863314.790	6229	229	9	
P-14_123		421298.425	3863315.095	5672	208	9	
P-14_132		421285.934	3863321.801	6517	263	8	
P-14_137		421293.095	3863323.627	1917	155	8	
P-14_141		421292.942	3863321.495	2780	97	8	
P-14_18		421290.656	3863319.515	42345	1493	37	
P-14_20		421301.626	3863322.102	33884	1718	28	
P-14_26		421295.685	3863323.627	12267	1105	20	
P-14_27		421284.259	3863323.173	22664	1021	20	
P-14_50		421288.067	3863320.277	6578	213	15	
P-14_58		421295.378	3863316.619	10839	366	14	
P-14_69		421294.160	3863317.076	10511	340	12	
P-14_76		421296.902	3863316.618	8342	281	12	
P-14_80		421296.445	3863318.904	5664	183	12	
P-14_83		421301.319	3863315.551	4897	180	13	
P-14_90		421294.312	3863318.447	6640	233	10	
P-14_95		421299.644	3863315.399	6257	202	10	
P-14_97		421293.856	3863323.057	4407	198	9	
P-15_102		421314.570	3863302.446	3230	118	10	
P-15_110		421321.576	3863295.235	2637	106	8	
P-15_114		421320.212	3863323.011	2310	93	7	
P-15_119		421328.737	3863297.262	3644	133	8	
P-15_12		421301.931	3863322.403	53715	2724	32	
P-15_121		421313.052	3863323.317	1860	107	8	
P-15_122		421331.175	3863300.461	2086	88	7	
P-15_125		421326.457	3863317.677	2298	88	8	
P-15_128		421327.213	3863296.958	3146	133	7	
P-15_13		421320.057	3863313.261	43692	1417	36	
P-15_131		421325.236	3863310.365	3442	120	7	
P-15_143		421325.236	3863307.318	1856	67	6	
P-15_146		421310.915	3863306.255	3529	114	7	
P-15_159		421326.455	3863310.822	2639	85	5	
P-15_16		421319.143	3863312.956	52313	1768	35	
P-15_169		421323.054	3863296.961	1861	100	5	
P-15_23		421329.754	3863311.696	32695	1153	33	
P-15_28		421317.160	3863302.597	12414	457	23	
P-15_38		421318.382	3863313.776	31182	1099	19	
P-15_40		421320.665	3863308.197	70357	2482	19	
P-15_49		421329.347	3863301.223	9658	340	16	
P-15_51		421331.633	3863302.755	15415	568	14	
P-15_63		421306.497	3863307.323	4771	183	13	
P-15_65		421330.260	3863296.296	12389	436	13	
P-15_71		421329.803	3863296.805	6128	236	11	
P-15_81		421301.928	3863313.034	2623	151	10	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
P-15_86		421303.603	3863310.066	3689	165	10	
P-15_88		421326.454	3863304.880	3447	121	11	
P-15_9		421315.788	3863300.008	54150	1757	33	
P-15_94		421307.411	3863307.475	2797	118	10	
P-15_97		421327.366	3863297.720	4770	167	9	
P-16_11		421347.170	3863294.362	449164	15849	93	
P-16_12		421340.620	3863297.411	232632	7866	86	
P-16_13		421341.534	3863296.649	299204	11037	75	
P-16_14		421337.268	3863296.955	109984	3432	69	
P-16_148		421352.965	3863317.752	3685	298	3	
P-16_15		421341.686	3863295.278	154549	5701	68	
P-16_19		421332.400	3863323.617	27333	2464	46	
P-16_20		421335.134	3863293.147	23703	2747	35	
P-16_21		421338.183	3863299.088	28909	1019	42	
P-16_22		421345.502	3863323.614	10822	675	32	
P-16_25		421339.401	3863296.345	39521	1457	30	
P-16_28		421342.447	3863294.516	18723	1687	24	
P-16_3		421362.863	3863299.995	555725	45103	561	
P-16_30		421338.185	3863308.686	26350	890	23	
P-16_31		421336.964	3863299.698	5426	231	17	
P-16_32		421332.698	3863299.546	9660	355	18	
P-16_33		421334.373	3863294.366	14808	500	15	
P-16_34		421340.162	3863295.431	7255	293	12	
P-16_35		421340.468	3863300.763	9219	339	12	
P-16_36		421362.864	3863302.585	1942	196	19	
P-16_38		421335.136	3863300.765	15675	552	14	
P-16_39		421340.164	3863301.525	5362	197	13	
P-16_40		421340.467	3863294.364	2363	136	15	
P-16_41		421339.859	3863300.306	6869	292	11	
P-16_42		421348.237	3863295.124	28648	1452	11	
P-16_43		421332.393	3863298.291	4214	213	10	
P-16_45		421337.119	3863309.448	6166	208	12	
P-16_48		421339.098	3863301.830	3542	143	11	
P-16_49		421336.050	3863299.698	3135	120	11	
P-16_50		421361.187	3863298.929	2410	139	11	
P-16_53		421352.046	3863298.474	3288	139	11	
P-16_54		421332.544	3863293.148	2087	211	10	
P-16_55		421333.612	3863299.089	4314	174	12	
P-16_56		421337.272	3863310.209	3922	137	9	
P-16_58		421354.483	3863297.560	5090	179	10	
P-16_6		421345.494	3863295.277	5361187	181301	349	
P-16_60		421351.132	3863296.647	3052	112	9	
P-16_61		421351.284	3863298.018	4251	149	10	
P-16_63		421349.153	3863303.655	57194	2730	10	
P-16_64		421355.398	3863300.149	3022	122	8	
P-16_67		421332.392	3863294.062	2227	128	7	
P-16_68		421332.392	3863294.671	2114	106	8	
P-16_73		421352.198	3863297.103	3670	123	7	
P-16_75		421357.531	3863300.149	2801	98	7	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
P-16_77		421356.769	3863300.454	2165	91	6	
P-16_79		421346.563	3863303.549	4671	171	6	
P-16_8		421346.104	3863294.820	4231409	156104	321	
P-16_80		421357.531	3863300.758	2406	88	7	
P-16_83		421356.160	3863299.540	2454	94	6	
P-16_84		421353.113	3863299.388	1796	72	5	
P-16_87		421353.265	3863297.560	2322	74	6	
P-16_90		421353.113	3863298.779	1958	75	5	
P-16_93		421358.293	3863300.606	1853	71	5	
P-17_101		421366.522	3863308.069	3324	134	8	
P-17_102		421370.179	3863307.459	2147	82	6	
P-17_113		421367.449	3863307.018	3583	131	8	
P-17_12		421374.867	3863299.265	4214	243	12	
P-17_121		421366.674	3863307.002	4010	141	8	
P-17_134		421382.065	3863315.378	2115	71	6	
P-17_15		421371.774	3863296.921	4118	158	13	
P-17_17		421362.863	3863298.319	4335	219	12	
P-17_18		421373.876	3863298.960	8203	288	12	
P-17_2		421362.892	3863300.438	636862	36920	234	
P-17_24		421368.349	3863298.471	2235	112	10	
P-17_25		421367.434	3863298.776	2148	82	8	
P-17_26		421368.808	3863310.049	4024	141	9	
P-17_3		421370.067	3863296.677	1431816	55337	187	
P-17_30		421381.151	3863315.226	4327	145	9	
P-17_31		421365.301	3863299.081	2421	81	8	
P-17_32		421364.721	3863300.453	10905	465	6	
P-17_34		421366.672	3863295.729	7983	258	8	
P-17_35		421366.977	3863299.538	1850	74	6	
P-17_38		421372.009	3863315.533	2025	77	6	
P-17_40		421381.150	3863312.789	2535	93	7	
P-17_42		421380.389	3863316.293	3043	102	8	
P-17_43		421381.249	3863313.840	4315	151	8	
P-17_44		421366.980	3863308.678	4566	160	11	
P-17_5		421368.193	3863295.975	1187532	43809	163	
P-17_53		421371.246	3863307.154	2958	99	6	
P-17_54		421372.008	3863307.763	1758	67	5	
P-17_55		421366.062	3863296.034	1948	68	5	
P-17_57		421371.549	3863297.557	3257	131	7	
P-17_58		421368.808	3863309.287	4237	149	7	
P-17_60		421380.335	3863313.825	2066	87	6	
P-17_64		421368.363	3863310.567	3138	115	6	
P-17_67		421366.523	3863309.288	3013	105	9	
P-17_72		421380.389	3863315.074	3795	127	7	
P-17_77		421372.465	3863312.181	2059	75	6	
P-17_8		421362.865	3863307.003	64938	3513	50	
P-17_80		421368.500	3863308.130	3208	117	7	
P-17_87		421370.180	3863313.553	1975	79	6	
P-17_91		421375.055	3863308.525	2354	79	6	
P-17_95		421366.522	3863305.784	1870	75	6	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
P-17_96		421367.741	3863306.241	2783	102	7	
P-21_16		421510.479	3863301.800	2516	92	9	
P-21_21		421504.595	3863305.784	1800	72	7	
P-21_37		421511.247	3863303.311	1785	84	4	
R-11_106		421204.586	3863339.038	10542	388	5	
R-11_12		421196.966	3863331.423	2441	141	10	
R-11_26		421187.368	3863329.750	2302	80	8	
R-11_34		421185.693	3863334.168	2469	94	9	
R-11_37		421182.341	3863332.341	1786	68	7	
R-11_99		421189.044	3863330.359	1727	57	4	
R-12_103		421233.987	3863334.917	2158	82	4	
R-12_109		421219.818	3863329.437	1734	116	2	
R-12_127		421220.738	3863351.374	1781	59	4	
R-12_154		421228.805	3863324.977	2087	105	7	
R-12_160		421228.043	3863324.407	2194	93	5	
R-12_165		421211.442	3863340.968	2855	115	3	
R-12_24		421235.053	3863331.566	7651	258	10	
R-12_25		421234.901	3863332.175	8626	279	11	
R-12_26		421239.775	3863326.963	8127	286	8	
R-12_30		421234.291	3863330.195	4256	156	9	
R-12_31		421237.795	3863329.584	3376	113	8	
R-12_33		421228.808	3863337.204	4893	172	5	
R-12_34		421229.265	3863336.290	5383	189	8	
R-12_35		421231.551	3863336.899	4017	147	8	
R-12_36		421239.776	3863332.174	3597	126	7	
R-12_37		421230.484	3863335.832	5995	194	8	
R-12_38		421230.636	3863337.051	4791	168	8	
R-12_42		421233.073	3863333.318	5903	207	8	
R-12_43		421238.099	3863326.537	4450	156	8	
R-12_44		421226.828	3863337.357	3205	107	5	
R-12_45		421232.465	3863336.594	2866	100	7	
R-12_47		421234.749	3863333.698	3476	127	8	
R-12_48		421236.729	3863333.241	1872	71	6	
R-12_49		421236.577	3863334.460	2277	83	5	
R-12_50		421229.725	3863346.649	4199	147	7	
R-12_51		421239.780	3863346.951	3012	110	7	
R-12_52		421238.863	3863335.830	1932	77	6	
R-12_56		421237.949	3863337.506	1740	70	6	
R-12_6		421229.568	3863329.282	46776	2108	101	
R-12_62		421235.816	3863334.765	3325	116	8	
R-12_63		421235.663	3863334.003	3562	130	10	
R-12_65		421237.184	3863326.385	2295	92	5	
R-12_7		421226.674	3863332.482	186083	6565	52	
R-12_74		421239.548	3863334.230	2231	81	5	
R-12_8		421240.688	3863323.642	2782	322	12	
R-13_101		421254.096	3863332.017	15996	518	13	
R-13_102		421264.303	3863331.100	3021	143	7	
R-13_104		421251.052	3863342.987	23911	843	19	
R-13_105		421254.095	3863326.228	10949	403	10	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
R-13_106		421248.765	3863333.390	14869	524	15	
R-13_107		421264.304	3863333.538	17920	605	13	
R-13_109		421248.310	3863340.855	10109	455	15	
R-13_110		421260.649	3863339.176	20393	787	17	
R-13_111		421252.422	3863337.350	9830	362	15	
R-13_112		421267.810	3863342.525	25193	785	18	
R-13_113		421257.145	3863339.177	33663	1137	24	
R-13_116		421262.018	3863330.187	6132	236	12	
R-13_117		421253.187	3863349.080	12159	394	14	
R-13_119		421262.177	3863353.039	10870	383	13	
R-13_120		421240.998	3863346.189	4119	222	9	
R-13_121		421270.246	3863336.735	20253	746	21	
R-13_122		421265.833	3863353.038	14288	482	14	
R-13_123		421252.121	3863350.147	8489	264	10	
R-13_125		421248.768	3863345.425	18397	678	20	
R-13_126		421262.478	3863330.680	6463	249	11	
R-13_127		421256.227	3863324.095	5757	274	10	
R-13_128		421264.760	3863330.795	2670	166	9	
R-13_129		421269.333	3863340.225	4944	364	8	
R-13_130		421251.966	3863342.682	16592	611	17	
R-13_132		421244.197	3863344.055	4223	179	10	
R-13_134		421248.006	3863345.578	13890	450	11	
R-13_135		421249.221	3863329.276	4015	162	8	
R-13_138		421266.744	3863343.135	11883	418	12	
R-13_139		421262.477	3863336.738	7115	240	11	
R-13_140		421249.225	3863344.663	28749	971	11	
R-13_141		421260.044	3863353.954	7706	390	12	
R-13_142		421242.520	3863338.419	14584	492	11	
R-13_145		421258.825	3863352.735	5019	225	13	
R-13_146		421243.431	3863328.821	8232	256	12	
R-13_147		421250.140	3863349.691	4947	181	10	
R-13_149		421252.878	3863334.303	31793	1121	24	
R-13_150		421244.197	3863343.294	6119	225	12	
R-13_151		421250.136	3863335.370	22922	845	18	
R-13_153		421255.313	3863324.400	8322	321	11	
R-13_154		421255.313	3863324.857	8664	305	11	
R-13_155		421260.650	3863340.699	15696	578	13	
R-13_156		421268.879	3863350.600	9988	351	13	
R-13_157		421271.313	3863336.278	13299	829	20	
R-13_158		421268.877	3863342.525	10123	390	13	
R-13_159		421260.497	3863338.262	25024	845	15	
R-13_160		421256.075	3863325.161	4217	200	9	
R-13_162		421250.136	3863334.304	23273	820	19	
R-13_163		421242.369	3863345.122	6254	220	8	
R-13_164		421259.583	3863338.871	24261	819	16	
R-13_165		421248.763	3863326.077	7973	340	9	
R-13_166		421257.911	3863352.888	5734	232	14	
R-13_167		421249.683	3863348.472	7723	284	12	
R-13_169		421247.394	3863334.000	15135	533	9	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
R-13_170		421249.680	3863339.484	5968	210	8	
R-13_171		421246.022	3863333.391	8183	301	12	
R-13_172		421261.106	3863336.738	11991	422	14	
R-13_173		421266.438	3863336.280	19922	646	11	
R-13_174		421254.708	3863340.549	9636	339	13	
R-13_175		421240.995	3863332.021	2586	139	9	
R-13_176		421249.226	3863349.843	4603	169	8	
R-13_177		421243.437	3863349.540	5422	175	9	
R-13_179		421245.413	3863333.848	8281	291	9	
R-13_180		421256.990	3863328.208	2869	154	10	
R-13_181		421244.349	3863342.380	10618	358	11	
R-13_182		421249.226	3863349.234	6914	254	9	
R-13_185		421242.670	3863328.517	6684	216	8	
R-13_186		421243.281	3863336.591	2897	117	8	
R-13_187		421250.594	3863338.874	2650	112	6	
R-13_188		421264.764	3863344.659	5087	187	9	
R-13_189		421240.994	3863331.107	2952	159	9	
R-13_190		421256.079	3863340.853	7265	267	11	
R-13_192		421254.251	3863341.767	9599	353	9	
R-13_193		421251.050	3863333.237	9806	418	15	
R-13_194		421270.248	3863342.829	5041	185	7	
R-13_196		421251.964	3863334.151	24513	903	21	
R-13_197		421245.567	3863338.418	5079	178	6	
R-13_199		421263.393	3863342.984	2532	88	7	
R-13_201		421267.047	3863336.584	19239	624	20	
R-13_203		421264.304	3863332.014	4289	165	2	
R-13_204		421258.671	3863346.794	3114	109	6	
R-13_206		421246.940	3863345.730	3823	182	7	
R-13_208		421240.994	3863330.041	2023	125	10	
R-13_209		421252.881	3863342.530	16338	630	17	
R-13_210		421256.994	3863343.443	8798	309	12	
R-13_212		421254.706	3863333.300	18012	695	19	
R-13_213		421267.965	3863349.686	3904	137	8	
R-13_214		421256.380	3863327.294	2408	102	6	
R-13_216		421257.295	3863327.598	3725	130	6	
R-13_217		421265.831	3863346.487	5772	186	9	
R-13_219		421247.394	3863335.523	9140	308	9	
R-13_220		421264.764	3863345.878	3423	120	7	
R-13_221		421255.466	3863326.837	2728	137	7	
R-13_222		421249.679	3863332.628	9239	325	10	
R-13_223		421263.240	3863343.441	2702	87	5	
R-13_224		421246.940	3863344.969	2445	141	7	
R-13_225		421255.318	3863343.595	9138	321	7	
R-13_226		421256.079	3863339.329	7299	281	12	
R-13_227		421261.564	3863340.699	10055	370	10	
R-13_228		421245.566	3863337.199	5010	193	5	
R-13_230		421251.964	3863332.780	11141	531	16	
R-13_231		421256.080	3863343.900	4309	166	4	
R-13_232		421248.769	3863347.863	4783	168	11	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
R-13_233		421263.390	3863334.909	13546	499	12	
R-13_234		421244.807	3863347.102	2095	84	6	
R-13_235		421264.762	3863337.346	3567	144	3	
R-13_236		421244.199	3863349.540	3882	136	9	
R-13_237		421244.808	3863348.473	3332	107	6	
R-13_239		421261.263	3863353.953	7126	320	11	
R-13_240		421262.326	3863343.593	1984	80	6	
R-13_243		421262.326	3863342.679	2301	84	6	
R-13_244		421241.148	3863336.744	2152	115	7	
R-13_246		421245.569	3863347.407	3786	133	7	
R-13_247		421265.831	3863347.554	4172	146	8	
R-13_249		421265.830	3863343.745	4794	168	8	
R-13_250		421270.703	3863333.841	17940	661	10	
R-13_251		421266.746	3863349.381	4807	149	7	
R-13_253		421250.897	3863332.475	6544	265	9	
R-13_254		421255.165	3863339.049	2806	119	7	
R-13_255		421245.569	3863348.016	3777	132	6	
R-13_257		421241.457	3863350.759	2595	99	6	
R-13_258		421262.021	3863341.918	3406	119	4	
R-13_259		421259.739	3863351.669	2836	109	7	
R-13_260		421246.935	3863326.383	2009	85	7	
R-13_263		421245.721	3863346.950	3583	120	7	
R-13_264		421240.998	3863344.056	1762	88	5	
R-13_265		421247.703	3863350.148	2534	85	6	
R-13_266		421242.214	3863332.478	1920	77	6	
R-13_267		421248.461	3863335.828	11479	372	9	
R-13_268		421246.635	3863346.949	2885	101	6	
R-13_269		421256.994	3863341.715	17761	626	19	
R-13_270		421246.484	3863349.082	3621	127	6	
R-13_271		421246.938	3863336.894	6716	236	12	
R-13_272		421246.941	3863348.320	2333	85	6	
R-13_273		421244.195	3863334.762	4870	219	11	
R-13_275		421247.093	3863349.996	3486	112	6	
R-13_276		421268.418	3863334.908	33910	1196	23	
R-13_277		421244.805	3863336.895	4946	181	6	
R-13_279		421251.206	3863349.386	4961	174	8	
R-13_280		421244.653	3863338.266	5002	176	5	
R-13_282		421265.678	3863345.360	3565	125	7	
R-13_283		421244.803	3863329.887	2677	93	5	
R-13_284		421249.682	3863346.491	7287	256	12	
R-13_287		421256.080	3863342.224	4001	140	4	
R-13_288		421247.852	3863337.808	7107	261	11	
R-13_290		421242.670	3863330.040	2058	72	4	
R-13_295		421245.113	3863349.692	2149	72	6	
R-13_296		421251.510	3863345.882	6130	225	11	
R-13_297		421269.335	3863344.963	2006	89	5	
R-13_298		421246.936	3863332.629	1885	117	7	
R-13_300		421257.454	3863353.650	1795	111	5	
R-13_302		421263.848	3863336.332	10419	367	11	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
R-13_307		421252.577	3863345.881	5629	198	9	
R-13_311		421242.519	3863336.743	2209	99	2	
R-13_313		421242.371	3863352.587	2397	84	5	
R-13_320		421257.453	3863349.841	1956	71	4	
R-13_322		421246.328	3863337.809	5472	177	7	
R-13_325		421246.023	3863336.572	3301	166	10	
R-13_330		421271.160	3863333.009	8132	412	11	
R-13_331		421243.282	3863341.472	2702	94	4	
R-13_332		421267.347	3863346.036	4647	156	8	
R-13_53		421255.620	3863330.798	20884	769	17	
R-13_54		421241.001	3863353.806	5235	424	19	
R-13_56		421253.030	3863330.189	13085	424	16	
R-13_58		421251.963	3863330.342	10354	381	15	
R-13_59		421260.192	3863336.738	17613	621	20	
R-13_60		421257.446	3863325.161	15536	572	20	
R-13_61		421269.337	3863352.885	21809	842	19	
R-13_62		421248.153	3863323.640	6148	623	16	
R-13_63		421256.535	3863333.921	14479	510	16	
R-13_64		421263.389	3863330.796	5492	222	15	
R-13_65		421270.251	3863352.428	14485	587	18	
R-13_66		421262.024	3863351.363	12984	478	16	
R-13_70		421260.495	3863330.644	22140	816	14	
R-13_73		421247.543	3863323.640	5616	650	15	
R-13_77		421253.030	3863331.103	16631	561	17	
R-13_78		421253.791	3863331.256	12693	467	12	
R-13_81		421262.476	3863335.367	9445	332	14	
R-13_82		421255.621	3863334.601	24939	919	24	
R-13_83		421251.049	3863330.495	5847	205	13	
R-13_84		421267.509	3863353.038	15418	568	15	
R-13_86		421240.993	3863327.451	6389	345	14	
R-13_87		421242.364	3863324.099	10915	553	13	
R-13_89		421247.395	3863340.703	14416	508	15	
R-13_90		421246.177	3863342.074	9546	322	14	
R-13_91		421250.135	3863329.581	3714	166	4	
R-13_93		421247.396	3863341.312	11536	406	13	
R-13_97		421251.969	3863350.909	5240	223	10	
R-13_99		421263.091	3863353.191	17429	565	13	
R-14_102		421283.197	3863339.017	4574	168	11	
R-14_104		421288.374	3863332.465	8145	314	14	
R-14_106		421276.952	3863346.636	10460	368	14	
R-14_108		421301.018	3863328.653	8377	308	13	
R-14_109		421271.769	3863335.516	9340	344	12	
R-14_111		421291.574	3863332.921	11159	393	13	
R-14_112		421273.140	3863335.059	9874	320	12	
R-14_113		421294.929	3863347.545	6681	235	11	
R-14_114		421294.320	3863346.327	6424	236	12	
R-14_115		421279.081	3863331.401	3389	144	12	
R-14_116		421285.176	3863334.751	7666	282	13	
R-14_118		421300.414	3863346.782	2549	102	7	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
R-14_119		421279.080	3863328.659	5765	222	11	
R-14_120		421294.015	3863348.307	5223	235	12	
R-14_121		421280.910	3863335.971	15095	509	14	
R-14_122		421279.385	3863327.592	8527	287	8	
R-14_123		421289.564	3863333.135	11018	372	12	
R-14_126		421287.766	3863334.598	7576	235	10	
R-14_129		421290.812	3863332.769	8291	279	10	
R-14_130		421299.416	3863324.759	7097	287	10	
R-14_133		421285.480	3863332.008	6190	208	10	
R-14_134		421288.988	3863347.699	5858	189	9	
R-14_135		421286.546	3863332.008	4236	180	9	
R-14_136		421290.508	3863333.835	8117	263	9	
R-14_139		421273.446	3863338.867	3927	132	8	
R-14_14		421276.496	3863350.598	45162	1593	32	
R-14_141		421300.103	3863325.606	4623	162	8	
R-14_142		421298.888	3863336.728	1759	83	8	
R-14_143		421276.038	3863346.332	4282	182	9	
R-14_147		421273.749	3863332.773	7843	276	12	
R-14_149		421275.730	3863332.621	7100	287	11	
R-14_151		421275.425	3863333.535	4484	151	9	
R-14_153		421279.083	3863339.932	1767	64	7	
R-14_154		421274.207	3863334.144	6259	230	9	
R-14_155		421300.845	3863353.050	10646	375	13	
R-14_156		421273.448	3863346.790	2312	77	7	
R-14_157		421301.881	3863330.431	2668	179	7	
R-14_158		421288.988	3863346.176	3589	126	9	
R-14_161		421291.422	3863334.292	6765	228	10	
R-14_163		421275.124	3863346.332	2665	107	8	
R-14_164		421274.206	3863330.793	5000	183	10	
R-14_165		421299.806	3863353.333	6637	223	8	
R-14_166		421285.631	3863326.524	1806	66	5	
R-14_168		421271.486	3863333.413	4203	243	10	
R-14_169		421276.491	3863332.468	4603	177	10	
R-14_17		421301.744	3863323.761	10798	1460	27	
R-14_170		421299.038	3863328.501	2800	98	8	
R-14_173		421272.532	3863339.172	2188	80	6	
R-14_179		421294.011	3863330.330	3288	106	8	
R-14_181		421297.819	3863329.720	4180	153	6	
R-14_183		421292.640	3863330.331	2490	91	6	
R-14_185		421274.665	3863337.648	2625	96	5	
R-14_187		421279.997	3863339.780	2657	89	6	
R-14_194		421272.378	3863346.926	1924	70	6	
R-14_20		421279.238	3863350.140	32173	1134	26	
R-14_22		421279.235	3863335.819	44902	1656	26	
R-14_226		421277.864	3863337.952	1714	59	5	
R-14_24		421275.582	3863350.902	27089	1046	26	
R-14_29		421273.754	3863351.360	21241	783	22	
R-14_30		421298.886	3863331.548	27558	1016	24	
R-14_35		421298.124	3863331.700	32105	1085	23	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
R-14_37		421282.736	3863327.134	23985	748	20	
R-14_38		421283.352	3863350.138	22041	812	18	
R-14_40		421282.434	3863334.904	25397	936	21	
R-14_41		421272.840	3863351.208	20196	682	20	
R-14_42		421299.648	3863331.700	24587	797	21	
R-14_43		421292.640	3863332.768	18022	635	19	
R-14_44		421271.525	3863341.989	10375	525	17	
R-14_45		421282.677	3863350.160	22118	717	17	
R-14_46		421281.067	3863350.291	13738	556	20	
R-14_47		421277.835	3863336.284	29491	1040	20	
R-14_49		421294.011	3863332.463	21774	706	22	
R-14_56		421278.019	3863347.702	17634	571	18	
R-14_57		421276.948	3863330.183	18803	693	20	
R-14_58		421280.299	3863327.439	14035	474	16	
R-14_59		421281.975	3863327.287	15874	585	16	
R-14_60		421291.578	3863347.242	16782	591	16	
R-14_63		421285.028	3863349.833	12916	436	15	
R-14_64		421292.340	3863347.241	19165	647	16	
R-14_65		421300.353	3863324.033	9449	510	17	
R-14_69		421278.324	3863348.921	19786	729	18	
R-14_70		421295.691	3863346.783	8836	341	11	
R-14_71		421276.496	3863348.922	18469	680	18	
R-14_72		421282.738	3863333.228	14206	523	16	
R-14_75		421297.818	3863324.693	11024	388	12	
R-14_77		421271.926	3863349.989	11338	437	15	
R-14_81		421296.599	3863325.759	8133	299	13	
R-14_82		421297.210	3863331.548	19721	666	16	
R-14_83		421271.735	3863351.854	11958	510	14	
R-14_84		421284.262	3863334.751	11110	409	15	
R-14_87		421289.899	3863334.750	8169	264	13	
R-14_88		421298.275	3863323.778	5407	398	11	
R-14_89		421297.057	3863329.568	5048	194	11	
R-14_90		421275.596	3863330.570	17536	677	16	
R-14_91		421300.844	3863345.528	9472	348	12	
R-14_92		421277.862	3863330.182	9593	370	14	
R-14_93		421287.310	3863340.235	5318	205	12	
R-14_94		421298.433	3863346.782	5075	195	11	
R-14_96		421278.781	3863346.941	8676	319	13	
R-14_97		421276.953	3863347.550	11733	432	15	
R-14_98		421285.482	3863340.540	6476	262	10	
R-14_99		421288.832	3863334.293	8738	321	13	
R-15_10		421320.371	3863347.386	96730	3270	56	
R-15_100		421311.529	3863324.232	6067	258	15	
R-15_107		421303.766	3863349.828	7131	288	13	
R-15_11		421330.108	3863351.319	111271	4104	54	
R-15_111		421301.938	3863350.008	6525	352	13	
R-15_117		421326.158	3863340.072	6761	322	12	
R-15_119		421328.598	3863346.013	12087	445	12	
R-15_121		421317.478	3863352.871	4075	183	16	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
R-15_125		421329.811	3863325.903	5616	206	14	
R-15_13		421329.513	3863350.583	99615	3233	53	
R-15_136		421327.529	3863338.853	7211	253	11	
R-15_139		421327.830	3863324.989	7064	228	11	
R-15_149		421328.291	3863338.700	7705	260	10	
R-15_15		421318.040	3863349.209	55500	1957	46	
R-15_155		421319.825	3863344.674	5149	198	11	
R-15_156		421327.679	3863330.931	2156	96	10	
R-15_158		421324.486	3863353.631	2806	174	13	
R-15_159		421315.954	3863348.606	6544	230	10	
R-15_160		421325.856	3863348.299	4799	204	9	
R-15_163		421319.000	3863347.234	6118	215	8	
R-15_164		421331.340	3863348.297	4293	138	8	
R-15_165		421306.808	3863329.413	6523	240	9	
R-15_167		421303.459	3863340.230	4681	172	9	
R-15_172		421305.592	3863339.782	2761	159	8	
R-15_173		421326.162	3863353.021	3301	127	9	
R-15_175		421320.678	3863353.632	2598	210	9	
R-15_177		421327.073	3863341.595	1820	86	9	
R-15_184		421326.474	3863353.514	3514	142	6	
R-15_186		421332.203	3863342.852	2456	165	10	
R-15_187		421326.611	3863323.990	3419	153	8	
R-15_189		421301.935	3863339.896	64553	5238	6	
R-15_19		421329.054	3863344.642	23914	1385	28	
R-15_191		421314.887	3863346.778	2714	104	7	
R-15_194		421319.153	3863350.738	2773	117	6	
R-15_200		421317.172	3863345.711	1839	64	7	
R-15_201		421331.488	3863330.016	2812	94	7	
R-15_202		421323.571	3863350.432	1762	74	7	
R-15_206		421330.272	3863339.638	2691	94	5	
R-15_208		421330.725	3863325.903	2162	87	8	
R-15_210		421329.510	3863340.528	2356	79	6	
R-15_215		421325.242	3863330.779	2114	77	6	
R-15_218		421327.987	3863340.376	1936	74	6	
R-15_219		421325.453	3863324.254	2537	85	6	
R-15_222		421323.417	3863342.510	2049	75	6	
R-15_247		421330.881	3863340.223	1736	58	4	
R-15_25		421320.373	3863352.109	13098	590	43	
R-15_35		421332.254	3863345.555	7175	528	32	
R-15_37		421327.930	3863349.747	25530	900	30	
R-15_4		421324.941	3863345.557	4918902	166344	396	
R-15_41		421321.286	3863351.042	16126	653	23	
R-15_45		421328.598	3863348.907	23377	790	23	
R-15_46		421320.545	3863344.199	15134	584	23	
R-15_48		421327.532	3863347.536	23934	844	29	
R-15_52		421322.808	3863345.405	17999	695	20	
R-15_57		421320.979	3863339.921	26601	863	18	
R-15_58		421325.195	3863340.513	18207	703	19	
R-15_60		421328.045	3863346.964	23383	824	25	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
R-15_66		421331.339	3863343.422	12135	393	26	
R-15_67		421316.106	3863351.196	16037	591	17	
R-15_69		421323.571	3863348.452	14897	464	19	
R-15_7		421326.617	3863344.947	347039	12802	173	
R-15_82		421328.599	3863350.126	29140	984	17	
R-15_83		421321.529	3863347.113	15312	539	14	
R-15_84		421328.595	3863335.958	9857	347	15	
R-15_85		421330.189	3863344.081	5766	333	23	
R-15_87		421322.183	3863352.173	4930	221	16	
R-15_88		421304.525	3863340.078	10234	360	15	
R-15_90		421323.113	3863347.385	15071	488	18	
R-15_91		421327.684	3863348.755	18836	611	13	
R-15_98		421315.192	3863348.758	8861	326	14	
R-16_100		421342.461	3863345.400	2815	103	7	
R-16_107		421346.119	3863350.579	2074	111	7	
R-16_108		421335.148	3863345.554	2438	123	7	
R-16_116		421339.718	3863344.029	2224	89	5	
R-16_117		421347.946	3863346.617	1838	74	6	
R-16_125		421336.217	3863353.476	2812	126	6	
R-16_129		421334.389	3863353.324	4574	168	6	
R-16_132		421337.893	3863353.018	2244	90	6	
R-16_156		421347.942	3863332.601	1797	90	5	
R-16_160		421339.263	3863349.514	2036	102	5	
R-16_21		421336.062	3863345.401	12810	519	28	
R-16_23		421343.376	3863347.989	8995	912	21	
R-16_238		421361.808	3863341.434	3951	177	4	
R-16_33		421337.131	3863353.628	4683	210	23	
R-16_34		421335.150	3863353.476	5139	231	17	
R-16_35		421342.463	3863353.474	5638	326	15	
R-16_36		421346.569	3863324.223	14731	628	15	
R-16_40		421348.404	3863351.416	5114	179	16	
R-16_42		421341.549	3863353.474	5092	217	13	
R-16_47		421343.375	3863345.857	3553	169	12	
R-16_48		421352.973	3863344.788	3767	138	11	
R-16_49		421336.060	3863335.804	5206	200	13	
R-16_57		421339.262	3863347.229	5369	206	10	
R-16_58		421338.347	3863342.354	2931	107	10	
R-16_59		421333.320	3863345.097	5578	196	10	
R-16_63		421336.518	3863340.374	3480	156	10	
R-16_67		421332.710	3863343.117	6090	246	9	
R-16_70		421339.261	3863342.354	3047	111	9	
R-16_74		421344.748	3863351.950	2813	133	7	
R-16_77		421334.235	3863347.992	5575	282	7	
R-16_78		421346.576	3863351.340	1978	99	8	
R-16_79		421342.918	3863346.466	2880	179	8	
R-16_80		421333.318	3863336.261	2966	104	8	
R-16_83		421335.150	3863352.105	2492	183	9	
R-16_84		421347.031	3863345.703	2090	112	7	
R-16_85		421332.404	3863336.262	3648	196	8	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
R-16_87		421332.863	3863344.336	4891	179	7	
R-16_91		421352.516	3863345.397	2786	132	7	
R-16_92		421338.959	3863353.323	2828	103	7	
R-16_96		421347.489	3863346.160	2458	104	7	
R-16_98		421336.518	3863341.288	2133	123	7	
R-16_99		421361.194	3863324.828	4094	207	7	
R-17_11		421375.671	3863338.993	4483	157	10	
R-17_14		421392.124	3863337.922	2854	115	8	
R-17_19		421389.839	3863339.141	4018	147	9	
R-17_24		421386.183	3863340.970	2795	98	8	
R-17_25		421368.204	3863332.748	4849	163	8	
R-17_27		421377.955	3863333.965	3126	114	8	
R-17_28		421369.270	3863332.748	3260	114	7	
R-17_29		421386.183	3863339.447	2655	107	8	
R-17_31		421367.106	3863332.454	6422	226	7	
R-17_32		421370.185	3863332.748	3090	108	7	
R-17_33		421391.513	3863331.981	3808	118	8	
R-17_35		421379.327	3863338.687	2825	103	7	
R-17_36		421388.922	3863327.716	1961	79	7	
R-17_38		421390.903	3863328.781	2589	95	8	
R-17_39		421391.464	3863330.021	4032	130	8	
R-17_4		421377.651	3863337.012	7617	246	12	
R-17_41		421390.753	3863339.293	2557	93	7	
R-17_42		421386.791	3863335.181	2496	87	6	
R-17_43		421390.753	3863338.075	2839	99	7	
R-17_44		421389.075	3863329.848	2312	88	7	
R-17_45		421383.439	3863332.287	3017	116	6	
R-17_46		421386.639	3863337.162	1943	82	6	
R-17_47		421384.107	3863333.513	3240	109	6	
R-17_48		421389.840	3863340.969	2627	96	6	
R-17_49		421364.395	3863331.683	3124	105	6	
R-17_5		421388.448	3863339.219	10496	369	12	
R-17_50		421371.099	3863332.900	2522	88	6	
R-17_51		421376.126	3863333.813	2129	78	6	
R-17_52		421385.725	3863337.771	1838	70	6	
R-17_55		421381.306	3863333.507	2368	79	6	
R-17_56		421384.811	3863335.334	1908	69	7	
R-17_58		421389.840	3863342.036	2752	101	5	
R-17_6		421376.585	3863338.688	5518	203	11	
R-17_64		421379.325	3863333.202	1742	63	6	
R-17_66		421385.572	3863335.181	2030	65	5	
R-17_72		421380.697	3863332.745	1948	71	5	
R-17_8		421376.737	3863337.164	6671	300	11	
R-17_9		421387.905	3863340.516	7010	270	11	
R-19_8		421442.098	3863353.685	7558	1021	34	
R-19_C35		421453.977	3863341.713				2
R-20_30		421473.894	3863345.956	4372	221	13	
R-20_32		421468.305	3863348.112	8891	313	13	
R-20_35		421464.648	3863351.158	1807	121	11	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
R-20_36		421454.740	3863343.389	2732	100	7	
R-20_39		421456.723	3863351.920	1883	89	8	
R-20_5		421458.907	3863347.493	82031	3025	55	
R-20_51		421462.512	3863343.237	1951	92	7	
R-20_59		421456.720	3863340.647	1783	79	7	
S-13_107		421250.449	3863364.163	5041	163	9	
S-13_109		421263.855	3863361.911	5764	202	8	
S-13_11		421267.053	3863359.893	22088	778	19	
S-13_111		421261.416	3863357.305	2387	80	5	
S-13_113		421262.027	3863362.942	2333	99	9	
S-13_115		421251.515	3863364.620	4603	155	8	
S-13_116		421258.368	3863354.106	1903	153	8	
S-13_118		421248.467	3863358.679	3704	136	9	
S-13_119		421263.091	3863356.390	4092	143	6	
S-13_120		421261.567	3863354.106	2253	202	5	
S-13_125		421249.686	3863358.374	4142	167	9	
S-13_126		421255.017	3863355.478	3650	134	5	
S-13_128		421255.171	3863360.969	6769	238	12	
S-13_13		421251.666	3863359.136	12828	611	30	
S-13_134		421249.687	3863365.382	2818	113	9	
S-13_139		421252.428	3863360.507	2071	104	5	
S-13_141		421269.798	3863367.510	3131	115	7	
S-13_142		421262.178	3863358.828	2274	96	9	
S-13_143		421262.788	3863360.199	5226	162	7	
S-13_144		421261.111	3863356.391	2579	109	6	
S-13_147		421267.206	3863362.026	9297	443	7	
S-13_148		421265.836	3863363.778	6309	204	7	
S-13_150		421252.277	3863364.163	3012	101	4	
S-13_153		421268.882	3863360.359	5674	199	8	
S-13_155		421257.152	3863363.095	3902	131	8	
S-13_157		421262.635	3863359.742	4633	149	6	
S-13_158		421250.601	3863363.197	2487	111	5	
S-13_159		421255.933	3863362.943	8376	295	8	
S-13_16		421264.771	3863370.454	23261	993	22	
S-13_160		421244.201	3863359.747	2947	103	7	
S-13_163		421262.177	3863355.934	1783	79	8	
S-13_164		421269.339	3863361.721	3011	110	7	
S-13_167		421268.428	3863373.452	1814	81	5	
S-13_169		421258.828	3863364.466	5467	210	10	
S-13_171		421258.675	3863362.181	3689	124	7	
S-13_174		421262.487	3863363.593	1870	71	6	
S-13_175		421271.169	3863367.421	3291	166	9	
S-13_178		421249.229	3863358.850	4469	157	5	
S-13_179		421264.922	3863364.160	6558	295	12	
S-13_18		421262.790	3863369.949	5589	301	23	
S-13_180		421258.371	3863365.228	3936	151	9	
S-13_182		421247.555	3863365.383	1924	67	5	
S-13_184		421267.059	3863369.534	3269	125	6	
S-13_185		421256.848	3863365.990	2973	109	8	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
S-13_187		421249.687	3863363.402	3221	113	8	
S-13_19		421263.552	3863369.035	8499	286	23	
S-13_199		421249.229	3863359.417	3072	112	5	
S-13_20		421264.161	3863369.035	12166	469	17	
S-13_204		421269.798	3863370.289	1800	80	5	
S-13_205		421244.353	3863358.528	1944	68	7	
S-13_207		421267.817	3863367.053	2755	111	6	
S-13_208		421259.284	3863361.419	2297	80	5	
S-13_23		421266.292	3863360.351	13335	470	18	
S-13_24		421264.615	3863355.781	21878	709	18	
S-13_243		421256.695	3863365.533	3362	118	6	
S-13_247		421242.373	3863357.919	1822	69	5	
S-13_248		421259.589	3863362.942	4320	174	10	
S-13_255		421248.773	3863363.097	2026	77	6	
S-13_264		421260.047	3863363.551	3579	144	5	
S-13_265		421257.760	3863360.810	1887	76	6	
S-13_266		421264.614	3863354.105	2968	240	7	
S-13_27		421267.513	3863371.014	8075	311	17	
S-13_279		421253.191	3863364.924	1762	56	4	
S-13_28		421249.532	3863355.785	16675	540	15	
S-13_29		421251.210	3863362.183	1964	318	17	
S-13_37		421262.786	3863354.258	2542	187	11	
S-13_39		421254.257	3863362.030	10984	387	15	
S-13_42		421244.050	3863363.251	4605	148	14	
S-13_43		421243.745	3863360.661	4758	192	13	
S-13_44		421259.587	3863355.325	10647	345	12	
S-13_47		421266.595	3863355.780	4484	172	9	
S-13_51		421253.038	3863361.268	3958	168	13	
S-13_52		421259.892	3863354.563	12580	463	14	
S-13_54		421260.654	3863357.000	4036	141	9	
S-13_55		421265.529	3863355.476	10589	390	10	
S-13_56		421250.448	3863359.898	2511	135	11	
S-13_57		421265.837	3863367.816	2941	113	8	
S-13_59		421246.335	3863362.184	5440	183	10	
S-13_61		421248.621	3863365.078	6000	194	12	
S-13_62		421251.515	3863363.554	3257	175	11	
S-13_63		421269.952	3863373.756	3454	116	7	
S-13_64		421268.273	3863361.112	17721	624	12	
S-13_68		421268.881	3863358.086	3846	183	10	
S-13_7		421271.474	3863369.795	6255	563	29	
S-13_70		421266.138	3863356.542	5840	248	8	
S-13_72		421245.878	3863362.184	5136	173	9	
S-13_73		421266.901	3863358.370	4367	186	5	
S-13_78		421241.001	3863354.111	1829	164	9	
S-13_8		421265.228	3863368.730	13539	784	27	
S-13_83		421253.494	3863357.459	3070	107	7	
S-13_85		421269.794	3863355.322	1711	68	4	
S-13_88		421269.795	3863358.521	2713	99	7	
S-13_89		421254.409	3863360.811	7658	258	10	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
S-13_9		421265.838	3863371.167	4873	207	21	
S-13_93		421248.619	3863356.699	6697	225	9	
S-13_94		421268.273	3863362.635	13332	432	13	
S-13_95		421247.247	3863356.242	2241	78	8	
S-13_96		421267.360	3863368.501	6800	229	9	
S-13_97		421269.495	3863374.822	2520	84	7	
S-13_98		421251.515	3863364.011	4726	182	9	
S-13_99		421266.597	3863363.854	2259	95	5	
S-14_100		421281.591	3863380.076	3827	147	9	
S-14_101		421292.958	3863380.910	4556	184	9	
S-14_102		421273.913	3863375.431	3555	119	6	
S-14_103		421296.459	3863370.854	3381	113	8	
S-14_105		421274.523	3863377.716	3437	138	9	
S-14_106		421273.303	3863371.165	5173	190	10	
S-14_107		421294.414	3863374.578	7609	256	10	
S-14_108		421288.844	3863379.388	2849	115	7	
S-14_110		421281.528	3863366.847	4345	152	8	
S-14_112		421287.473	3863377.712	2938	148	9	
S-14_113		421290.670	3863372.227	4612	169	10	
S-14_115		421283.814	3863370.401	2463	90	8	
S-14_117		421276.046	3863376.039	4121	151	8	
S-14_119		421291.281	3863376.340	4437	143	8	
S-14_120		421281.678	3863358.213	2974	96	7	
S-14_121		421296.613	3863375.272	3733	131	9	
S-14_122		421273.304	3863374.669	3251	109	8	
S-14_123		421297.437	3863373.972	6472	238	10	
S-14_125		421299.353	3863369.787	4898	165	9	
S-14_126		421291.161	3863380.164	5387	189	8	
S-14_128		421277.869	3863357.300	2838	114	9	
S-14_129		421275.588	3863370.555	2195	177	7	
S-14_130		421281.988	3863377.257	3307	121	8	
S-14_133		421299.503	3863358.818	3664	128	8	
S-14_134		421290.058	3863363.086	3375	109	7	
S-14_135		421301.183	3863376.947	2366	119	9	
S-14_136		421274.674	3863372.536	2447	94	6	
S-14_137		421275.132	3863375.583	2560	108	7	
S-14_140		421282.293	3863379.389	5925	218	9	
S-14_141		421294.633	3863376.339	2248	78	7	
S-14_143		421282.899	3863365.526	2164	109	6	
S-14_145		421301.635	3863356.760	2294	115	7	
S-14_147		421277.112	3863375.430	2139	82	6	
S-14_148		421296.460	3863373.292	4498	158	9	
S-14_149		421280.612	3863360.194	1857	78	8	
S-14_15		421299.199	3863361.408	14982	485	21	
S-14_150		421289.300	3863373.751	5128	197	10	
S-14_151		421272.695	3863377.259	1939	97	7	
S-14_152		421297.525	3863370.701	2137	74	7	
S-14_153		421301.635	3863355.045	3770	190	10	
S-14_154		421301.334	3863369.786	2925	102	8	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
S-14_156		421288.842	3863372.227	4549	167	9	
S-14_159		421283.957	3863380.083	4670	151	8	
S-14_160		421300.268	3863369.634	2990	105	7	
S-14_161		421273.757	3863360.349	3500	123	7	
S-14_164		421278.179	3863375.734	2071	87	7	
S-14_166		421282.896	3863356.690	1860	74	6	
S-14_170		421277.109	3863361.871	2148	78	8	
S-14_171		421285.182	3863357.755	2475	90	7	
S-14_172		421294.627	3863354.858	1886	95	6	
S-14_176		421289.297	3863364.153	1905	76	6	
S-14_177		421291.581	3863360.496	2346	99	8	
S-14_178		421292.194	3863373.445	3012	97	7	
S-14_180		421285.377	3863375.910	2697	108	6	
S-14_181		421291.582	3863361.715	2711	115	7	
S-14_185		421292.650	3863370.703	2796	86	7	
S-14_190		421299.814	3863383.955	2000	147	5	
S-14_191		421283.816	3863376.190	1863	79	5	
S-14_194		421272.527	3863366.872	2289	76	5	
S-14_199		421291.584	3863371.770	2288	80	6	
S-14_208		421289.144	3863361.411	2026	71	6	
S-14_212		421282.744	3863357.756	2039	71	5	
S-14_214		421293.412	3863371.007	2109	73	6	
S-14_226		421287.011	3863361.411	2047	78	7	
S-14_233		421275.935	3863361.314	2213	94	5	
S-14_24		421301.636	3863361.407	10776	582	16	
S-14_243		421300.721	3863356.380	2173	87	7	
S-14_246		421299.502	3863355.161	1713	57	7	
S-14_27		421271.474	3863369.526	5878	317	14	
S-14_31		421286.558	3863375.732	6637	244	13	
S-14_33		421293.715	3863363.999	15624	506	16	
S-14_34		421280.160	3863378.324	6966	332	14	
S-14_35		421301.184	3863379.232	7244	255	12	
S-14_37		421294.786	3863381.214	7681	282	11	
S-14_38		421298.595	3863382.584	8868	312	11	
S-14_39		421295.546	3863374.358	8674	334	13	
S-14_42		421285.710	3863378.420	10887	420	13	
S-14_43		421295.695	3863362.932	7263	280	12	
S-14_44		421285.341	3863381.217	11774	414	13	
S-14_45		421271.475	3863371.242	4734	239	10	
S-14_46		421293.715	3863362.019	9521	321	12	
S-14_49		421281.835	3863373.600	5835	214	12	
S-14_50		421282.928	3863377.695	9712	357	12	
S-14_53		421275.590	3863377.563	5098	196	12	
S-14_54		421298.286	3863367.197	2743	105	11	
S-14_55		421294.024	3863381.214	8003	281	11	
S-14_56		421289.300	3863375.579	4586	185	11	
S-14_57		421294.933	3863362.780	9624	311	10	
S-14_58		421296.614	3863381.671	7181	264	11	
S-14_59		421289.758	3863378.930	4113	158	9	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
S-14_62		421287.318	3863370.857	71198	2407	11	
S-14_63		421284.730	3863377.865	9232	340	14	
S-14_64		421297.376	3863381.823	7483	242	10	
S-14_65		421285.641	3863364.611	5760	202	11	
S-14_66		421293.105	3863362.476	10271	332	12	
S-14_67		421295.853	3863381.823	7942	257	11	
S-14_69		421284.727	3863364.154	4337	146	8	
S-14_70		421299.404	3863382.558	7930	305	10	
S-14_71		421289.756	3863372.379	5891	216	11	
S-14_72		421278.936	3863358.062	6753	260	11	
S-14_73		421287.471	3863372.228	6648	244	13	
S-14_74		421277.418	3863378.324	5273	185	10	
S-14_75		421288.692	3863380.911	3179	116	9	
S-14_76		421283.817	3863378.932	9518	350	12	
S-14_77		421292.958	3863379.234	4017	154	11	
S-14_79		421290.214	3863375.883	4500	158	8	
S-14_82		421274.674	3863371.774	3601	121	8	
S-14_83		421282.904	3863367.311	3212	216	10	
S-14_84		421272.389	3863371.165	5163	181	8	
S-14_86		421296.652	3863379.082	3785	161	9	
S-14_88		421300.116	3863372.834	2996	127	9	
S-14_90		421292.043	3863378.930	3705	142	10	
S-14_91		421276.346	3863358.977	4393	161	10	
S-14_93		421293.713	3863355.315	4450	171	9	
S-14_95		421279.090	3863377.875	5311	226	9	
S-14_96		421275.588	3863372.079	3210	117	8	
S-14_97		421282.442	3863366.288	3628	154	9	
S-15_100		421319.423	3863374.053	2974	150	7	
S-15_102		421327.086	3863379.795	3312	121	7	
S-15_105		421319.614	3863364.297	2525	107	6	
S-15_106		421320.378	3863371.457	2776	106	7	
S-15_107		421329.673	3863379.225	3281	115	8	
S-15_108		421325.251	3863364.500	3458	127	8	
S-15_109		421321.597	3863373.437	4780	184	7	
S-15_114		421302.401	3863371.462	2334	81	6	
S-15_115		421327.082	3863363.746	2981	133	6	
S-15_116		421321.980	3863355.526	2629	132	8	
S-15_117		421305.082	3863360.972	2759	101	6	
S-15_120		421330.740	3863380.595	2462	104	6	
S-15_121		421317.026	3863371.458	2128	81	7	
S-15_123		421309.712	3863365.366	2484	83	6	
S-15_125		421330.277	3863360.333	1910	77	8	
S-15_126		421327.541	3863382.805	2764	172	6	
S-15_127		421304.074	3863362.016	4581	154	6	
S-15_128		421316.112	3863371.611	2132	78	7	
S-15_130		421329.364	3863363.609	3490	134	6	
S-15_132		421302.419	3863363.770	2063	97	7	
S-15_133		421330.739	3863379.072	2158	82	7	
S-15_135		421330.734	3863358.505	1772	79	7	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
S-15_136		421324.643	3863356.648	2747	110	6	
S-15_137		421328.906	3863360.790	2150	82	6	
S-15_139		421325.251	3863363.412	2694	114	6	
S-15_142		421327.080	3863367.190	1759	64	6	
S-15_144		421324.493	3863378.769	2082	79	6	
S-15_147		421325.253	3863374.046	2129	81	7	
S-15_148		421331.806	3863380.595	2517	88	6	
S-15_149		421304.232	3863383.991	3309	121	6	
S-15_151		421324.363	3863367.854	1880	72	5	
S-15_153		421329.974	3863366.579	2830	108	5	
S-15_154		421315.350	3863371.915	1991	80	6	
S-15_155		421328.046	3863363.700	2483	91	6	
S-15_158		421328.452	3863372.064	2133	81	6	
S-15_162		421302.552	3863367.805	2191	73	6	
S-15_165		421326.807	3863382.532	3225	124	6	
S-15_166		421321.547	3863365.008	2021	96	5	
S-15_167		421302.854	3863356.684	2346	82	6	
S-15_169		421302.558	3863383.559	2692	103	6	
S-15_172		421302.367	3863355.629	2065	92	6	
S-15_173		421327.538	3863372.458	1816	73	6	
S-15_174		421327.233	3863370.998	2059	79	5	
S-15_177		421306.058	3863376.022	1816	81	4	
S-15_178		421326.167	3863372.065	1735	73	5	
S-15_180		421313.366	3863358.052	1777	119	3	
S-15_185		421329.367	3863372.637	1756	78	4	
S-15_212		421315.352	3863377.095	1725	66	5	
S-15_224		421325.405	3863372.370	1858	68	5	
S-15_243		421324.032	3863365.057	1898	76	4	
S-15_247		421324.493	3863377.702	1950	65	4	
S-15_25		421304.228	3863367.957	11133	410	16	
S-15_273		421304.988	3863362.015	1776	79	3	
S-15_3		421315.199	3863375.724	69069	2436	42	
S-15_31		421306.973	3863376.488	8797	324	13	
S-15_32		421323.426	3863374.960	5971	268	12	
S-15_33		421323.358	3863368.725	9771	344	14	
S-15_35		421322.965	3863361.706	10746	378	13	
S-15_38		421315.194	3863356.985	10519	387	13	
S-15_42		421322.337	3863372.997	7955	358	12	
S-15_47		421306.118	3863354.489	3455	199	9	
S-15_49		421326.013	3863364.295	7181	264	11	
S-15_53		421308.531	3863354.573	6284	299	8	
S-15_56		421320.711	3863368.139	10097	409	11	
S-15_57		421306.609	3863366.422	6141	216	11	
S-15_60		421317.941	3863373.438	4239	171	10	
S-15_61		421323.579	3863380.293	6219	218	9	
S-15_62		421316.565	3863355.157	2676	180	9	
S-15_63		421331.804	3863372.825	6803	250	10	
S-15_64		421321.183	3863383.704	2383	192	9	
S-15_67		421308.187	3863361.101	7367	229	10	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
S-15_71		421315.194	3863358.850	4072	219	8	
S-15_74		421326.165	3863362.924	3637	183	7	
S-15_78		421316.108	3863356.833	5585	238	8	
S-15_79		421321.597	3863374.351	3250	125	8	
S-15_82		421319.791	3863379.768	3163	170	8	
S-15_83		421306.086	3863358.007	4839	170	8	
S-15_84		421308.798	3863364.757	4089	157	8	
S-15_85		421322.963	3863355.917	3147	141	9	
S-15_86		421310.631	3863382.581	3727	158	7	
S-15_87		421331.651	3863372.064	5035	177	7	
S-15_92		421310.625	3863360.643	3929	158	8	
S-15_93		421302.893	3863384.497	2221	163	7	
S-15_95		421305.292	3863357.445	4863	157	8	
S-15_96		421327.141	3863362.712	3598	182	7	
S-15_97		421306.971	3863371.613	3494	122	9	
S-15_99		421329.823	3863371.896	5628	253	7	
S-16_12		421363.000	3863374.500	7212	389	17	
S-16_16		421347.500	3863384.250	9013	487	20	
S-16_17		421335.741	3863371.405	4708	211	13	
S-16_31		421336.500	3863370.500	1862	100	11	
S-16_32		421334.244	3863380.469	6029	221	10	
S-16_4		421348.750	3863384.000	31513	1065	27	
S-16_41		421333.750	3863357.500	2762	106	8	
S-16_42		421336.250	3863358.500	3402	124	8	
S-16_43		421358.917	3863354.079	4222	263	6	
S-16_44		421336.050	3863359.495	2592	99	7	
S-16_46		421348.750	3863380.000	2337	94	7	
S-16_47		421332.856	3863357.489	2426	93	7	
S-16_49		421337.937	3863375.001	1837	106	6	
S-16_50		421348.412	3863380.925	2188	103	5	
S-16_52		421335.212	3863358.627	2879	101	7	
S-16_54		421334.192	3863371.126	2192	84	6	
S-16_56		421350.150	3863378.384	4529	159	6	
S-16_60		421357.850	3863377.650	1849	74	6	
S-16_64		421336.525	3863366.258	2966	126	6	
S-16_66		421334.250	3863381.500	1955	87	6	
S-16_69		421350.240	3863381.650	2010	95	6	
S-16_94		421356.176	3863361.371	4379	154	6	
S-17_11		421380.251	3863375.859	6458	237	11	
S-17_13		421372.025	3863378.299	2847	127	15	
S-17_21		421381.165	3863376.773	4548	153	9	
S-17_23		421368.366	3863369.006	3422	125	9	
S-17_25		421378.118	3863374.641	5275	170	8	
S-17_27		421387.565	3863379.666	3515	118	9	
S-17_29		421384.822	3863377.838	5250	184	8	
S-17_30		421390.003	3863381.188	4895	152	8	
S-17_33		421382.080	3863377.077	3750	131	8	
S-17_34		421366.081	3863369.921	3068	107	8	
S-17_35		421392.593	3863382.559	3502	134	8	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
S-17_36		421367.449	3863358.952	2916	112	8	
S-17_37		421369.280	3863368.397	3253	119	7	
S-17_38		421388.479	3863381.189	2273	91	8	
S-17_39		421375.224	3863375.403	2070	119	7	
S-17_41		421387.718	3863384.388	2564	103	8	
S-17_42		421370.194	3863368.397	3225	118	7	
S-17_43		421376.135	3863366.872	2761	96	7	
S-17_44		421388.480	3863384.236	1741	93	7	
S-17_46		421375.221	3863365.958	2562	89	7	
S-17_47		421371.565	3863368.853	1952	82	8	
S-17_48		421367.605	3863369.159	2850	109	5	
S-17_49		421378.423	3863376.012	2327	81	7	
S-17_51		421377.204	3863376.926	2161	69	6	
S-17_52		421370.651	3863369.463	2494	87	6	
S-17_57		421375.224	3863376.927	1767	67	6	
S-17_58		421372.239	3863376.669	2308	77	6	
S-17_60		421364.862	3863368.855	2042	68	5	
S-17_62		421377.052	3863375.860	1706	86	5	
S-18_2		421420.717	3863374.866	1626507	62861	186	
S-18_4		421423.114	3863374.031	228658	8435	84	
S-19_10		421454.050	3863357.739	173060	10032	104	
S-19_107		421440.272	3863373.561	8576	386	12	
S-19_11		421441.488	3863355.428	134487	5197	91	
S-19_115		421441.186	3863375.847	1857	107	8	
S-19_117		421442.557	3863374.323	2976	219	10	
S-19_118		421432.197	3863364.725	2237	106	9	
S-19_15		421423.840	3863374.334	65593	4094	63	
S-19_152		421445.298	3863363.348	5565	281	9	
S-19_16		421440.216	3863361.936	56607	3533	60	
S-19_17		421449.868	3863357.864	34889	1489	60	
S-19_173		421442.099	3863360.761	1843	124	9	
S-19_175		421435.246	3863377.218	1938	86	5	
S-19_18		421440.806	3863359.218	135423	6464	65	
S-19_19		421452.610	3863357.711	50582	2052	57	
S-19_192		421433.266	3863377.066	1817	81	6	
S-19_20		421438.539	3863360.585	20119	4081	44	
S-19_213		421444.378	3863372.343	1734	140	7	
S-19_23		421440.727	3863357.562	35579	2220	54	
S-19_24		421443.259	3863358.379	54656	1773	43	
S-19_25		421439.510	3863371.428	53758	2077	47	
S-19_26		421441.184	3863356.952	59784	2425	60	
S-19_33		421452.914	3863356.339	32278	1138	35	
S-19_34		421443.135	3863364.451	31011	1143	33	
S-19_4		421426.559	3863356.194	669208	33946	234	
S-19_41		421423.826	3863361.840	8962	484	26	
S-19_42		421438.290	3863357.410	21758	882	29	
S-19_45		421435.244	3863366.400	15223	536	28	
S-19_46		421448.954	3863357.560	7466	318	19	
S-19_48		421431.132	3863371.733	11853	457	26	

Anomaly ID	Associate	Easting (UTMm, Zone 17N, NAD83)	Northing (UTMm, Zone 17N, NAD83)	Sum Of Signal Squared	SNR	Ch1 Amp (mV)	Chi2 Amp (mV)
S-19_54		421451.086	3863358.016	9585	323	25	
S-19_55		421450.477	3863354.359	17234	931	26	
S-19_58		421439.567	3863373.181	10455	565	16	
S-19_64		421435.244	3863365.791	12810	577	22	
S-19_65		421432.395	3863371.692	11174	452	17	
S-19_67		421453.506	3863354.508	4953	267	21	
S-19_77		421441.186	3863372.952	10429	422	16	
S-19_82		421426.258	3863369.449	6664	234	15	
S-19_86		421428.391	3863374.781	2078	98	15	
S-19_9		421453.067	3863359.845	91887	5736	132	
S-19_91		421427.171	3863368.991	3677	141	12	
S-20_16		421455.186	3863361.481	37693	1329	29	
S-20_2		421458.248	3863363.197	699112	28370	144	
S-20_21		421477.450	3863355.882	10887	630	20	
S-20_34		421457.538	3863359.854	4578	231	9	
S-20_5		421456.599	3863360.188	138411	6240	71	
S-20_7		421458.194	3863364.488	139298	6649	73	
T-15_C11		421320.229	3863386.389				3
T-15_C7		421331.655	3863384.556				2
T-16_2		421350.698	3863384.551	4649	313	23	
T-16_27		421338.431	3863385.338	2008	73	6	
T-16_3		421349.784	3863384.551	4641	376	22	
T-16_31		421354.356	3863391.423	3372	151	6	
T-16_69		421339.730	3863387.144	2637	164	4	
T-16_7		421354.346	3863390.709	3940	167	17	
T-16_79		421349.328	3863386.398	1721	115	4	
T-17_1		421387.109	3863401.609	55517	3754	52	
T-17_14		421377.503	3863399.969	3770	436	16	
T-17_20		421380.558	3863392.620	9463	348	13	
T-17_33		421384.824	3863401.458	2829	114	15	
T-17_41		421365.876	3863391.313	5783	212	8	
T-17_50		421362.905	3863386.292	2300	116	7	
T-17_56		421374.769	3863385.154	3011	110	7	
T-17_58		421365.476	3863394.452	1842	114	5	
T-17_85		421378.578	3863390.944	2063	66	5	
M-22_52		421516.569	3863256.645			13	

APPENDIX F5
CONVENTIONAL VS. CHI2

Dig Results for 15 January 2005 SOW Analysis

anomaly id	associate	interpreted easting	interpreted northing	associate interpreted easting	associate interpreted northing	distance from sum to associate, m	distance from sum to reacquired, m	distance from sum to investigation, m	interpreted local easting, ft	interpreted local northing, ft	interpreted max amplitude, mV	reacquired max amplitude, mV	reacquisition offset x, ft	reacquisition offset y, ft	reacquisition date	reacquisition comments	anomaly type	description	dimension, in	weight, lbs	dig offset x, in	dig offset y, in	Orient of nose	Inclin of nose	depth to top, in	depth to center of mass, in	photo	dig date	dig team initials	pass dig qc	dig qc initials	dig qc date	post dig geo agree	post dig geo initials
M-22_13	M-22_C12	421520.5311	3863260.7995	421520.2264	3863260.647	0.341	0.628	0.628	17.5	94.0	68	65	1	0	01/08/05		CD	Wire	120	2					1	1		1/10/2005	HEL				YES	AJP
M-22_21	M-22_C33	421516.8740	3863257.7535	421517.0263	3863257.754	0.152	0.152	0.051	5.5	84.0	31	36	0.5	0.5	01/08/05		GEO	Rock	2 x 2	1	0	-8			4	6		1/10/2005	HEL					
M-22_23		421518.5508	3863261.2570						11.0	95.5	30	31	1	0	01/08/05		GEO	Rocks	4 x 4	1	-10	0			0	8		1/10/2005	HEL				YES	AJP
M-22_26	M-22_C36	421517.3316	3863259.7339	421516.9975	3863259.795	0.340	0.496	0.386	7.0	90.5	31	47	0	-1	01/08/05		GEO	Rock	8 x 8	10	-18	0			3	10		1/10/2005	HEL				YES	AJP
M-22_3	M-22_C4	421522.8119	3863244.1933	421522.5073	3863244.498	0.431	0.431	0.341	25.0	39.5	293	315	0	0	01/08/05		CD	Barb wire	240	2	-6	0			1	1		1/10/2005	HEL				YES	AJP
M-22_33		421516.8744	3863259.1246						5.5	88.5	22	25	0	0	01/08/05		GEO	Rock	5 x 5	5	8	0			4	10		1/10/2005	HEL				YES	AJP
M-22_36	M-22_C59	421526.6225	3863251.5048	421526.6225	3863251.505	0.000	0.000	0.305	37.5	63.5	18	20	0	0	01/08/05		GEO	Rock confirmed during Phase II	5	0.5	-12	0			6	9		1/10/2005	HEL				YES	AJP
M-22_38	M-22_C38	421523.2731	3863259.7323	421523.4254	3863259.732	0.152	0.216	0.482	26.5	90.5	21	18	1	-0.5	01/08/05		GEO	Rocks	5 x 5	10	12	0			4	9		1/10/2005	HEL				YES	AJP
M-22_4	M-22_C3	421523.5737	3863244.6501	421523.4213	3863244.498	0.215	0.000	0.152	27.5	41.0	291	400	-0.5	-0.5	01/08/05		CD	Barb wire	240	2	6	0			1	1		1/10/2005	HEL				YES	AJP
M-22_40	M-22_C28	421521.7436	3863237.1857	421521.5912	3863237.033	0.215	0.646	0.482	21.5	16.5	19	22	1	1	01/08/05		CD	Barb wire	10	0.5	0	-12			8	12		1/10/2005	HEL				YES	AJP
M-22_50		421526.1643	3863247.3916						36.0	50.0	12	6	0	0	01/08/05		GEO	Rock	4 x 5	5	14	0			8	10		1/10/2005	HEL				YES	AJP
M-22_63		421524.7906	3863237.6419						31.5	18.0	10	10	-1	0.5	01/08/05		GEO	Rock	2 x 3 x 2	0.5	-24	0			4	5		1/10/2005	HEL				YES	AJP
M-22_64		421524.7936	3863248.7631						31.5	54.5	9	16	0	1	01/08/05		GEO	Rocks		15	0	-18			3	15		1/10/2005	HEL				YES	AJP
M-22_76	M-22_C56	421523.2661	3863233.6813	421523.4184	3863233.681	0.152	0.000	0.000	26.5	5.0	7	20	0.5	0	01/08/05		CD	Barb wire	12	0.5			N	N/A	3	3		1/10/2005	HEL				YES	AJP
M-22_9	M-22_C7	421517.4847	3863262.4578	421517.4846	3863262.324	0.134	0.134	0.134	7.5	99.4	110	160	0	0	01/08/05		CD	Barb wire fond during Phase II initially geology	60	2					3	3		1/10/2005	HEL				YES	AJP
N-21_1	N-21_C1	421514.2725	3863278.6738	421514.4452	3863278.272	0.437	0.492	0.378	96.9	52.7	785	400	1.5	0	01/09/05		CD	Wire fence	60	3	0	-6			0	0		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_14		421509.4176	3863289.7488						81.0	89.0	74	51	0.5	1	01/09/05		CD	Hinge and wire	2 x 6	2	0	-24			1	1		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_21	N-21_C41	421510.6360	3863288.0726	421510.7883	3863287.92	0.215	0.152	0.482	85.0	83.5	39	55	0.5	0	01/09/05		CD	Hinge	2 x 6	2	18	0			2	4		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_23		421504.0700	3863282.5367						63.5	65.3	39	60	0	0	01/09/05		CD	Wire/rock	120	2	0	10			0	2		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_26	N-21_C42	421513.2014	3863262.7289	421513.0666	3863262.63	0.167	0.167	0.167	93.4	0.3	31	148	0	0	01/09/05		CD	Wire	20	1					2	8		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_3	N-21_C2	421514.1690	3863282.7826	421514.0879	3863282.482	0.312	0.793	0.793	96.6	66.1	243	102	0.5	1.5	01/09/05		CD	Wire	25	2					0	0		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_36	N-21_C26	421511.6237	3863280.2600	421511.7002	3863280.15	0.134	0.134	0.134	88.2	57.9	16	25	0	0	01/09/05		CD	Wire	20	1					1	1		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_38		421503.9304	3863279.5430						63.0	55.5	16						CD	Spike	8	1	2	0			2	6		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_45	N-21_C36	421510.8021	3863264.6494	421510.7563	3863264.688	0.060	0.123	0.135	85.6	6.6	14	24	0	0.5	01/09/05		GEO	Rocks	5 x 5	10	1	0			4	8		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_47		421514.9016	3863287.9557						99.0	83.1	11	12	0	0	01/09/05		CD	Wire	15	1	0	4			0	2		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_49		421513.9836	3863273.1415						96.0	34.5	12	15	0	-1	01/09/05		CD	Nail	2	0.1	0	-6			2	3		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_5	N-21_C6	421509.7177	3863272.6855	421509.8701	3863272.686	0.152	0.341	0.341	82.0	33.0	152	160	1.5	0.5	01/09/05		CD	Survey spike	10	1					1	5		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_51	N-21_C40	421501.1528	3863292.0927	421501.1915	3863291.884	0.212	0.214	0.214	53.9	96.7	11	17	-0.5	-1	01/09/05		GEO	Rock	6 x 6	5					0	4		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_52		421510.0259	3863285.4828						83.0	75.0	10	14	1	0	01/09/05		GEO	Rock	4 x 4	2	0	2			1	4		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_54		421512.9163	3863269.9424						92.5	24.0	12	6	0	0	01/09/05		GEO	Rock	4 x 4	5					1	3		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_57		421511.4743	3863271.4749						87.8	29.0	10	11	0	0	01/09/05		GEO	Rock	5 x 5	5					2	4		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_6	N-21_C7	421509.5788	3863281.2414	421509.1107	3863281.37	0.485	0.485	0.485	81.5	61.1	119						CD	Wire and nails		5					0	3		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_60		421514.5015	3863276.6287						97.7	45.9	9	5	0	1	01/09/05		CD	Shared with #1	60									1/11/2005	HEL	Yes	HEL	01/2005		
N-21_61		421502.9458	3863290.4413						59.8	91.3	8	15	1	0	01/09/05		GEO	Rock	4 x 4	3					1	3		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_62		421507.3891	3863286.3756						74.3	77.9	7	14	-0.5	1	01/09/05		CD	Wire	20	1					1	2		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_7	N-21_C5	421512.1558	3863274.5131	421512.1557	3863274.361	0.152	0.305	0.356	90.0	39.0	99	67	0	0.5	01/09/05		CD	Wire	28	1	0	2			0	4		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_8	N-21_C21	421512.7631	3863266.7431	421512.7631	3863266.743	0.000	0.341	0.628	92.0	13.5	87	115	1	-0.5	01/09/05		CD	Wire	15	1	12	0			1	3		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_91		421503.0176	3863284.2659						60.0	71.0	3	3	0	0	01/09/05		GEO	Rock	3 x 3	3	-2	0			0	2		1/11/2005	HEL	Yes	HEL	01/2005		
N-21_93		421504.3906	3863291.4260						64.5	94.5	4	3	1	-0.5	01/09/05		GEO	Rock	2 x 2	2	0	6			0	1		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_10	N-22_C8	421524.3485	3863292.3348	421524.4305	3863292.311	0.085	0.388	0.388	30.0	97.5	43	3	-1	0	01/09/05		NC											1/11/2005	HEL	Yes	HEL	01/2005		
N-22_100		421540.3377	3863264.4504						82.5	6.0	3				01/09/05	No contact	CD	Nail	2	0.1	8	0			2	4		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_102		421515.9661	3863280.6061						2.5	59.0	3	5	0	0	01/09/05		GEO	Rock	3 x 3	2	20	0			0	2		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_105		421516.4221	3863276.5687						4.0	45.8	2	103	0.5	0.5	01/09/05		GEO	Rocks	10 x 10	15					0	10		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_106		421528.9150	3863277.5129						45.0	48.9	3	3	-0.75	0	01/09/05		GEO	Rock	3 x 3	2	2	0			0	3		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_108		421527.9992	3863271.0048						42.0	27.5	3	4	0	0	01/09/05		GEO	Rock	3 x 3	2					0	3		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_12	N-22_C7	421518.0947	3863264.7611	421518.0947	3863264.761	0.000	0.216	0.183	9.5	7.0	45	85	0.5	-0.5	01/09/05		CD	Nails / Rock		1	-2	0			6	6		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_16	N-22_C14	421523.4265	3863263.0838	421523.4681	3863262.938	0.151	0.477	0.477	27.0	1.5	31	25	0.5	-2	01/09/05		CD	Wire	60	0.5					3	3		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_19	N-22_C26	421520.2343	3863289.4413	421520.1992	3863289.41	0.047	0.493	0.950	16.5	88.0	24	29	1.5	0	01/09/05		CD	Nail	4	1	18	0			2	4		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_21		421520.6855	3863267.8074						18.0	17.0	21	26	0	0	01/09/05		CD	Wire	24	1	10	0			0	2		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_24	N-22_C3	421539.8839	3863276.2577	421539.8838	3863276.182	0.076	0.766	1.025	81.0	44.8	32	7	2.5	0	01/09/05		CD	Nail	4	0.1	0	-30			4	6		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_26	N-22_C33	421524.3417	3863267.1970	421524.5667	3863267.127	0.236	0.243	0.243	30.0	15.0	18	28	1.5	0	01/09/05		CD	Nail	2	0.1					0	2		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_27		421517.9496	3863291.5748						9.0	95.0	15	20	0	0	01/09/05		CD	Old fire		0					3	4		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_29	N-22_C30	421522.5164	3863277.7097	421522.5164	3863277.71	0.000	0.000	0.000	24.0	49.5	16	25	0	0	01/09/05		CD	Nail	2	0.1					0	2		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_3	N-22_C9	421528.4569	3863273.5946	421528.4445	3863273.767	0.173	0.173	0.194	43.5	36.0	116	124	0	0	01/09/05		CD	Wire	24	2	3	0			0	6		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_30	N-22_C10	421539.5777	3863270.6970	421539.5777	3863270.697	0.000	0.305	0.610	80.0	26.5	19	24	1	0	01/09/05		CD	Wire	12	0.5	12	0			0	0		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_31		421519.0112	3863273.5972						12.5	36.0	13	18	0.5	-0.5	01/09/05		CD	Metal	1	1					3	4		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_33		421523.8869	3863275.5764						28.5	42.5	12	19	0	0	01/09/05		GEO	Rock	4 x 4	5	12	0			3	4		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_37	N-22_C40	421524.6474	3863270.8534	421524.4951	3863270.853	0.152	0.152	0.152	31.0	27.0	10	18	0	0	01/09/05		CD	Nail	2	0.1					0			1/11/2005	HEL	Yes	HEL	01/2005		
N-22_4	N-22_C4	421516.1144	3863265.5234	421516.1144	3863265.523	0.000	0.341	0.341	3.0	9.5	76	125	1	-0.5	01/09/05		CD	Wire	24	2					0	2		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_5	N-22_C23	421518.4048	3863284.5665	421518.4078	3863284.719	0.152	0.152	0.025	10.5	72.0	62	108	0	0	01/09/05		CD	Bolt	8	1.5	0	5			2	4		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_6	N-22_C5	421523.4334	3863288.6786	421523.5039	3863288.65	0.076	0.076	0.076	27.0	85.5	64				01/09/05	No contact	NC											1/11/2005	HEL	Yes	HEL	01/2005		
N-22_60	N-22_C39	421525.2552	3863264.9115	421525.2552	3863264.759	0.152	0.000	0.203	33.0	7.5	4	5	0	-0.5	01/09/05		GEO	Rocks	5 x 5	5	8	0			0	3		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_7	N-22_C15	421524.8013	3863276.4903	421524.8284	3863276.426	0.069	0.069	0.069	31.5	45.5	44	69	0	0	01/09/05		CD	Wire	24	1					0	6		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_72		421528.0028	3863284.4116						42.0	71.5	4	2.5	-0.5	-0.5	01/09/05		NC											1/11/2005	HEL	Yes	HEL	01/2005		
N-22_8	N-22_C19	421521.7587	3863293.0972	421521.6446	3863292.917	0.214	0.214	0.400	21.5	100.0	48	88	0	0	01/09/06		CD	Hinge	2 x 4	1	0	8			2	4		1/11/2005	HEL	Yes	HEL	01/2005		
N-22_9	N-22_C11	421522.0586	3863275.1199	421522.1728	3863275.094	0.117	0.117	0.138	22.5	41.0	45	83	0	0	01/09/05		GEO	Rock	2 x 2	0.5	0	2			2	3		1/11/2005	HEL	Yes	HEL	01/2005		
P-16_10	P-16_C10	421339.2488	3863297.7164	421339.0964	3863297.564	0.215	0.152	0.282	22.5	15.0	154	210	-0.5	0	01/11/05		CD	Paint can / weld rods	8 x 7	1	-4	4			4	8		1/13/2005	DRG				YES	AJP
P-16_17	P-16_C25	421338.3337	3863293.9080	421338.3337	3863293.908	0.000	0.341	0.628	19.5	2.5	57	87	0.5	1	01/11/05		CD	Weld rod	20	0.25	0	12			4	4		1/12/2005	DRG				YES	AJP
P-16_23		421348.3885	3863293.7527						52.5	2.0	31	25	0	0	01/11/05		GEO	Rock	1 x 1	0.25	3	0			2	3		1/12/2005	DRG				YES	AJP
P-16_24	P-16_C32	421340.9251	3863299.3917	421340.7727	3863299.239	0.215	0.410	0.521	28.0	20.5	28	49	0.75	0	01/11/05		CD	Weld rods	6 x 4	0.25	0	8			3	4		1/13/2005	DRG				YES	AJP
P-16_26		421337.8785	3863300.6113						18.0	24.5	25	40	0	0.75	01/11/05		CD	Hasp/weld rods	3 x 2	0.5	8	0			5	5		1/13/2005	DRG				YES	AJP
P-16_27	P-16_C30	421334.5269	3863300.6123	421334.5269	3863300.612	0.000	0.341	0.397	7.0	24.5	25	25	1	0.5	01/11/05		CD	Hasp/weld rods	7 x 7	0.5	0	4			6	7		1/13/2005	DRG				YES	AJP
P-16_29	P-16_C34	421338.7946	3863308.2284	421338.7945	3863307.771	0.457	0.457	0.482	21.0	49.5	23	30	0	0	01/11/05		CD	Weld rods	3 x 0.5	0.25	0	1			6	6		1/13/2005	DRG				YES	AJP
P-16_46		421354.7885	3863298.9306						73.5	19.0	10	13	0	0	01/11/05		CD	Square nail	2 x 0.375	0.2	8	8			0.5	0.5		1/12/2005	DRG				YES	AJP
P-16_47		421341.6876	3863302.2861						30.5	30.0	10	10	0.5	0.5	01/11/05		CD	Weld rod	6 x 0.187	0.25	-6	6			3	3		1/13/2005	DRG				YES	AJP
P-16_5	P-16_C6	421343.0571	3863296.1918	421343.0571	3863296.192	0.000	0.000	0.000	35.0	10.0	361	40	0	0	01/11/05		CD	Weld rods (60 pcs)	18 x 8	4	0	0			4	4		1/12/2005	DRG				YES	AJP
P-16_57		421341.0792	3863305.7902						28.5	41.5	10	6	0.5	0.5	01/11/05		CD	Weld rod	5 x 0.187	0.25	0	3			6	6		1/13/2005	DRG				YES	AJP
P-16_71		421344.5821	3863301.9805						40.0	29.0	8	6	0	0	01/11/05		CD	Tubing 3/8"	1 x 0.2	0.05	0	1			3	3		1/12/2005	DRG				YES	AJP
P-16_72		421336.3606	3863321.4831						13.0	93.0	7	12	0	0	01/11/05		GEO	Rock	5 x 4	2	5	0			4	5		1/13/2005	DRG				YES	AJP
P-16_9	P-16_C11	421348.0866	3863303.9600	421348.0866	3863303.96	0.000	0.000	0.203	51.5	35.5	142	155	0	0	01/11/05	Sprinkler head	CD	Sprinkler head	4 x 4		8	0			0	0		1/13/2005	DRG				YES	AJP
P-21_1	P-21_C1	421498.2100	3863304.2414	421498.2287	3863304.058	0.184	0.340	0.311	44.2	36.5	262	200	1	0	01/09/05		CD	Rebar	0.375 x 24	2	0	-12			0	12		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP
P-21_12		421505.1794	3863293.3833						67.1	0.9	15	19			01/09/05		GEO	Geo dirt/rock							0	18		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP
P-21_13		421499.2113	3863304.2284						47.5	36.5	14	135	0	0	01/09/05		CD	Nails (4)	6	0.25	6	6			0	0		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP
P-21_15		421501.7360	3863303.2211						55.8	33.2	7	34	0	0.5	01/09/05		CD	Nail (1)	6	0.25	10	-10			0	2		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP
P-21_19		421505.3052	3863306.3604						67.5	43.5	7	7	1.5	0.5	01/09/05		MD	MK II frag	2	0.5	0	-18			0	0		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP
P-21_2	P-21_C3	421502.6961	3863293.8014	421502.6412	3863293.848	0.072	0.549	0.570	58.9	2.3	43	75	1.5	-0.5	01/09/05		CD	Survey pin	8	0.25	0	-2			0	4		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP
P-21_20		421501.4025	3863304.9515						54.7	38.9	7	12	1.5	-0.5	01/09/05		CD	Wire	4	0.05	6	0			0	0		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP
P-21_3		421500.4008	3863302.5719						51.4	31.1	42	45	1	-1.5	01/09/05		CD	Wire	10	0.25	0	10			0	0		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP
P-21_32		421505.6099	3863305.2935						68.5	40.0	4	13	0	0.5	01/09/05		CD	Steel cap	2	0.25	6	-6			1	1		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP
P-21_33		421505.3052	3863297.5212						67.5	14.5	4	3	0	0	01/09/05		GEO	Rock	4 x 6	3	4	4			0	1		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP
P-21_4	P-21_C5	421496.1650	3863302.1544	421496.1644	3863302.096	0.059	0.765	0.929	37.5	29.7	37	50	2.5	0	01/09/05		CD	Survey pin	8	0.25	6	6			0	4		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP
P-21_44		421499.8207	3863295.3890						49.5	7.5	3	4	0	0	01/09/05		CD	Nail	1	0.01	-2	0			0	0		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP
P-21_5	P-21_C2	421509.9994	3863304.1177	421509.6751	3863304.133	0.325	0.325	0.548	82.9	36.1	37	67	0	0	01/09/05		CD	Wire	18	1	0	18			0	0		1/12/2005	HEL	Yes	HEL	01/2005	YES	AJP
P-21_63		421503.9341	3863300.1124						63.0	23.0	3	3	1	0	01/09/05		CD	Nail/wire	6	0.05	8	-8			0	0		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP
P-21_8		421504.3911	3863303.1602						64.5	33.0	20	15	1	-1	01/09/05		CD	Horse shoe (1/2)	6	0.5	-3	0			0	0		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP
P-22_1	P-22_C3	421520.6930	3863295.8307	421520.6255	3863295.822	0.068	0.068	0.304	18.0	9.0	71	125	0	0	01/09/05		CD	Wire	10	1	0	-12			6	6		1/11/2005	HEL	Yes	HEL	01/2005		
P-22_2	P-22_C4	421520.6928	3863294.8556	421520.6928	3863294.856	0.000	0.305	0.610	18.0	5.8	70	115	0	1	01/09/05		CD	Nails	4	1	0	12			6	6		1/11/2005	HEL	Yes	HEL	01/2005		
P-22_3	P-22_C1	421520.6936	3863297.9727	421520.6936	3863297.973	0.000	0.000	0.305	18.0	16.0	41	97	0	0	01/09/05		CD	Hinge	2 x 6	1	-12	0			4	6		1/11/2005	HEL	Yes	HEL	01/2005		
P-22_5	P-22_C5	421519.0930	3863294.4691	421519.0316	3863294.109	0.366	0.366	0.217	12.8	4.5	36	5.5	0	0	01/09/05		CD	Nail	6	0.1	0	-6			2	3		1/11/2005	HEL	Yes	HEL	01/2005		
P-22_6		421518.4076	3863295.2310						10.5	7.0	33	2	-1.5	2	01/09/05		GEO	Rocks	5 x 5	5	10	0			3	3		1/11/2005	HEL	Yes	HEL	01/2005		
P-22_7		421517.9522	3863301.1728						9.0	26.5	7	12	0.5	-0.5	01/09/05		CD	Wire/rocks	3 x 3	2	8	0			0	3		1/11/2005	HEL	Yes	HEL	01/2005		
P-22_8		421518.6380	3863302.0105						11.3	29.3	4	5	0	-0.5	01/09/05		GEO	Rock	4 x 4	5	12	0			3	5		1/11/2005	HEL	Yes	HEL	01/2005		
P-22_9		421517.4948	3863299.8018						7.5	22.0	3	0.5	0.5	-1.5	01/09/05		CD	Wire	10	0.5	6	0			2	2		1/11/2005	HEL	Yes	HEL	01/2005		
R-11_1	R-11_C3	421202.1491	3863342.5430	421201.9968	3863342.695	0.215	0.152	0.152	72.5	62.0	31	70	-0.5	0	01/12/05	Survey nail	CD	Survey nail										1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP
R-11_11							0.000	0.000				18	0	0	01/12/05		QC	QC Nail		0.25						1		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP
R-11_14		421185.9979	3863333.4065						19.5	32.0	13	12	0	0	01/12/05	Mulch pile	GEO	Rock, very small in dirt - mulch pile								2		1/13/2005	RLF				YES	AJP
R-11_16	R-11_C6	421186.9118	3863332.4922	421186.9118	3863332.645	0.152	0.152	0.152	22.5	29.0	12	4	0	0	01/12/05	Mulch pile	CD	Wire - mulch pile	2	0.25						1		1/13/2005	RLF				YES	AJP
R-11_17		421203.8214	3863329.2885						78.0	18.5	8	12	-1	-0.5	01/12/05		CD	Nail	5	0.25						3		1/13/2005	RLF				YES	AJP
R-11_19		421187.3679	3863329.1405						24.0	18.0	11	22	-1	-1.5	01/12/05		CD	Metal	2 x 5	0.5						4		1/13/2005	RLF				YES	AJP

Dig Results for 15 January 2005 SOW Analysis

anomaly id	associate	interpreted easting	interpreted northing	associate interpreted easting	associate interpreted northing	distance from sum to associate, m	distance from sum to reacquired, m	distance from sum to investigation, m	interpreted local easting, ft	interpreted local northing, ft	interpreted max amplitude, mV	reacquired max amplitude, mV	reacquisition offset x, ft	reacquisition offset y, ft	reacquisition date	reacquisition comments	anomaly type	description	dimension, in	weight, lbs	dig offset x, in	dig offset y, in	Orient of nose	Inclin of nose	depth to top, in	depth to center of mass, in	photo	dig date	dig team initials	pass dig qc	dig qc initials	dig qc date	post dig geo agree	post dig geo initials
R-11_25	R-11_C16	421184.1696	3863332.7976	421184.1697	3863332.95	0.152	0.216	0.216	13.5	30.0	7	9	-0.5	1	01/12/05		CD	Wire	7	0.25						2		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP
R-11_29		421199.2525	3863335.0788						63.0	37.5	7	3	0	0.5	01/12/05		GEO	Rock, very small								2		1/13/2005	RLF				YES	AJP
R-11_41		421205.9571	3863339.7998						85.0	53.0	5	8	1	1	01/12/05		CD	3/8 x 2 bolt		0.25	13	13				2		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP
R-11_8		421206.8678	3863327.3072						88.0	12.0	15	15	-1	0.25	01/12/05		CD	Horseshoe	0.25	0.5						8		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP
R-12_10	R-12_C7	421240.6905	3863334.1539	421240.6905	3863334.154	0.000	0.305	0.449	99.0	34.5	48	99	0	1	01/05/05		CD	Wire	8	0.25	-17	-17				2		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP
R-12_11	R-12_C9	421226.2179	3863335.2241	421226.0656	3863335.224	0.152	0.152	0.152	51.5	38.0	28	56	-1	0	01/05/05		CD	Rod	0.25 x 18	0.25	0	0						1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP
R-12_12	R-12_C11	421225.1514	3863335.0720	421225.1514	3863334.92	0.152	0.152	0.341	48.0	37.5	27	40	0	0	01/05/05		CD	Can	3 x 2.5	0.25	12	0						1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP
R-12_13	R-12_C12	421227.5888	3863334.4620	421227.4366	3863334.919	0.482	0.466	0.466	56.0	35.5	25	40	-0.8	0	01/05/05		CD	Strap	1 x 12 x 0.125	0.25						9		1/13/2005	RLF	Yes	HEL	1/19/2005		
R-12_14		421234.2892	3863323.7961						78.0	0.5	19	33	0.5	-0.5	01/05/05		CD	Metal screw		0.25						1		1/13/2005	RLF				YES	AJP
R-12_16		421240.6888	3863327.6031						99.0	13.0	13	24	0.5	0.5	01/05/05		CD	Very small			0	-24				4		1/13/2005	RLF	Yes	HEL	1/19/2005		
R-12_20		421233.8347	3863333.2416						76.5	31.5	13	15	0	0.5			CD	Very small			0	-12				1		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP
R-12_21		421240.3870	3863338.5720						98.0	49.0	12	8	0	1	01/05/05		CD	Very small			0	-24				4		1/13/2005	RLF				YES	AJP
R-12_23		421235.0528	3863330.6514						80.5	23.0	9	9	-2.8	0	01/05/05		CD	Very small			-3	0				1		1/13/2005	RLF				YES	AJP
R-12_27		421240.5388	3863336.4391						98.5	42.0	9	4	-1.5	0	01/05/05		CD	Very small								5		1/13/2005	RLF				YES	AJP
R-12_28		421239.9279	3863330.9548						96.5	24.0	8	21	0.5	0	01/05/05		NC											1/13/2005	RLF	Yes	HEL	1/19/2005		
R-12_29		421237.7962	3863335.2211						89.5	38.0	9	17	0	0	01/05/05		CD	Very small			0	-30				4		1/13/2005	RLF				YES	AJP
R-12_32		421227.8943	3863337.5088						57.0	45.5	5	15	0	0	01/05/05		CD	Very small			-8	8				1		1/13/2005	RLF				YES	AJP
R-12_39		421229.2678	3863346.1921						61.5	74.0	9	15	-1	0	01/05/05		CD	Bolt	0.375 x 1.5	0.25	0	24				1		1/13/2005	RLF				YES	AJP
R-12_40		421240.8462	3863346.4938						99.5	75.0	8	11	0	0	01/05/05		CD	Very small								4		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP
R-12_41		421237.7954	3863332.1742						89.5	28.0	6	20	1	1	01/05/05		GEO	Hot dirt			-8	-8				6		1/13/2005	RLF				YES	AJP
R-12_46		421232.0065	3863333.0897						70.5	31.0	8	8	0	0	01/05/05		CD	Wire	2	0.25	0	12				1		1/13/2005	RLF				YES	AJP
R-12_53		421229.7254	3863348.3248						63.0	81.0	6	7	0	0	01/05/05		CD	Very small								2		1/13/2005	RLF				YES	AJP
R-12_54		421225.1522	3863337.9666						48.0	47.0	7	10	1.1	1.1	01/05/05		CD	Very small			8	-8				1		1/13/2005	RLF				YES	AJP
R-12_55		421229.7199	3863327.7583						63.0	13.5	6	10	0	0	01/05/05		MD	Pull ring		0.25	0	6				3		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP
R-13_100		421258.3679	3863353.4970						57.0	98.0	15	14	-0.2	-1	01/06/05		CD	1" banding - Also 166	12 x 1	0.25					3	5		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	DRA
R-13_115		421255.7773	3863350.6031						48.5	88.5	13	12	-0.5	1	01/06/05		MD	Frag	0.25 x 0.5	0.25	25	-25			2	2		1/13/2005	RLF	Yes	HEL	01/2005	YES	DRA
R-13_14	R-13_C16	421268.4224	3863351.9709	421268.4224	3863351.971	0.000	0.216	0.482	90.0	93.0	44	44	-0.5	-0.5	01/06/05		CD	Nail	10	0.25	-12	0			1	2		1/13/2005	RLF	Yes	HEL	01/2005	YES	DRA
R-13_148		421259.7380	3863349.6880						61.5	85.5	10		-0.5	-1	01/06/05		CD	Wire	10	0.25						3		1/13/2005	RLF	Yes	HEL	01/2005	YES	DRA
R-13_161		421257.4522	3863347.4034						54.0	78.0	8	7.7	1	-0.5	01/06/05		GEO	Rock	0.5 x 0.5		0	-30				3		1/13/2005	RLF	Yes	HEL	01/2005	YES	DRA
R-13_42	R-13_C25	421271.4667	3863342.2197	421271.1619	3863342.067	0.341	0.152	0.457	100.0	61.0	16	15	-0.5	-0.5	01/06/05		CD	Bar	1 x 6 x 0.25	0.5	-24	0			2	3		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	DRA
R-13_51		421262.6333	3863352.1248						71.0	93.5	17	13	0.5	0.7	01/06/05		GEO	Hot dirt			30	0			4	8		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	DRA
R-13_67		421264.7665	3863353.3430						78.0	97.5	17	17	0	-1.3	01/06/05		GEO	Hot dirt							4	8		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	DRA
R-13_75		421269.4858	3863341.0014						93.5	57.0	13	13	-1	0	01/06/05		CD	Handle	6	0.25	0	6			2	2		1/13/2005	RLF	Yes	HEL	01/2005	YES	DRA
R-13_76		421253.1873	3863350.2991						40.0	87.5	16		0	0	01/05/05		CD	Wire	0.125 x 12	0.25	0	6			2	3		1/13/2005	RLF	Yes	HEL	01/2005	YES	DRA
R-13_80		421254.7106	3863349.5370						45.0	85.0	13	13	0	0	01/06/05		CD	Very small			30	0				3		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	DRA
R-13_96		421253.3371	3863341.0059						40.5	57.0	14	10	-0.5	1	01/06/05		CD	Nail	5	0.25	0	12			1	3		1/13/2005	RLF	Yes	HEL	01/2005	YES	DRA
R-15_C45	R-15_88	421304.2205	3863339.9253	421304.5252	3863340.078	0.341	0.341	0.341	7.5	53.5	2	16	0	0	01/19/05		CD	Nail										1/14/2005	RLF				YES	DRA
R-19_11	R-19_C11	421443.3151	3863348.5718	421443.4674	3863348.572	0.152	0.152	0.457	64.0	82.0	33	53	0	0	01/08/05		CD	Wire	18	0.25	-12	0				0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_12	R-19_C14	421442.3085	3863348.2725	421442.484	3863348.343	0.189	0.189	0.189	60.7	81.0	31	21	0	0	01/08/05		GEO	Rock								1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_13	R-19_C9	421437.0684	3863352.8921	421437.0698	3863352.916	0.024	0.024	0.024	43.5	96.2	30	40	0	0	01/08/05		GEO	Rock								2		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_14		421445.0908	3863349.7758						69.8	86.0	24		0.5	-0.5	01/08/05		CD	Wire	12	0.25						1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_15	R-19_C12	421444.5333	3863346.5909	421444.3964	3863346.719	0.187	0.187	0.312	68.0	75.5	27	32	0	0	01/08/05		GEO	Rock			0	-6				2		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_17	R-19_C24	421446.3832	3863343.4678	421446.6654	3863343.543	0.292	0.292	0.292	74.1	65.3	16	30	0	0	01/08/05		GEO	Rock								1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_20		421453.5206	3863342.3226						97.5	61.5	15	19	1.5	0	01/08/05		CD	Horseshoe	0.5	0.5						1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_24	R-19_C40	421452.1524	3863353.1396	421452.1524	3863352.987	0.152	0.341	0.305	93.0	97.0	14	14	1	0	01/08/05		CD	Nail	6	0.25	0	-6				1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_25		421446.8730	3863346.5934						75.7	75.5	14	20	0	0	01/08/05		GEO	Rock								0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_26	R-19_C39	421450.5753	3863354.0062	421450.3244	3863353.75	0.359	0.615	0.615	87.8	99.8	12	34	0	1	01/08/05		CD	Pliers								1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_27	R-19_C21	421445.1594	3863346.3832	421445.2668	3863346.486	0.149	0.112	0.112	70.1	74.8	13	20	0.5	0	01/08/05		GEO	Rock								0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_28		421439.3536	3863346.8209						51.0	76.3	13	25	0	0	01/08/05		GEO	Rock								2		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_30	R-19_C25	421445.8497	3863352.6100	421445.7537	3863352.532	0.124	0.710	0.710	72.3	95.3	13	13	2	0	01/08/05		CD	Wire		0.25						0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_30		421445.8497	3863352.6100	421445.2968	3863353.142	0.767	1.278	1.278	72.3	95.3	13	13	2	0	01/08/05		CD	Wire		0.25						0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_31	R-19_C15	421447.5795	3863343.8478	421447.5795	3863343.695	0.152	0.152	0.000	78.0	66.5	14	24	0	0	01/08/05		CD	Nail	1.5	0.25	0	-6				3		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_32		421436.9179	3863353.7534						43.0	99.0	10	26	1	0	01/08/05		CD	Wire	1	0.25						1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_33	R-19_C17	421448.6457	3863342.7811	421448.7635	3863342.793	0.118	0.118	0.118	81.5	63.0	12	26	0	0	01/08/05		GEO	Rock								1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_36	R-19_C22	421437.4136	3863349.6974	421437.5262	3863349.792	0.147	0.147	0.147	44.6	85.7	9	15	0	0	01/08/05		GEO	Rock								1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_39	R-19_C37	421447.5800	3863345.8283	421447.58	3863345.828	0.000	0.000	0.610	78.0	73.0	10	20	0	0	01/08/05		GEO	Large rock			17	-17				8		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_4	R-19_C8	421449.7118	3863341.7143	421449.7118	3863341.714	0.000	0.152	0.152	85.0	59.5	74	75	0	-0.5	01/08/05		CD	Wire	18	0.25						1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_40	R-19_C19	421451.2243	3863340.4567	421451.2349	3863340.495	0.040	0.343	0.343	90.0	55.4	7	3	0	-1	01/08/05		GEO	Rock								0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_41	R-19_C20	421446.9703	3863344.3050	421447.1226	3863344.153	0.215	0.681	0.681	76.0	68.0	10	22	-1.5	0.5	01/08/05		GEO	Rock								1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_45		421438.4792	3863352.5456						48.1	95.0	8	25	0.5	0	01/08/05		GEO	Rock								2		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_46	R-19_C41	421442.5528	3863346.4391	421442.5528	3863346.439	0.000	0.000	0.000	61.5	75.0	7	16	0	0	01/08/05		GEO	Rock								2		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_47	R-19_C32	421443.2795	3863345.7698	421443.3144	3863345.982	0.215	0.215	0.215	63.9	72.8	8	22	0	0	01/08/05		GEO	Rock								1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_48		421453.7164	3863353.9785						98.1	99.8	6	5	0	0	01/08/05		CD	Screw driver		1	0	12				0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-19_6		421438.3713	3863347.2081						47.8	77.5	47	50	0	0	01/08/05		CD	Nails		0.25						1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_1	R-20_C1	421478.0594	3863352.2249	421478.0736	3863352.376	0.151	0.151	0.155	78.0	94.0	1428	3	0	0	01/08/05	Barb wire around tree	CD	Wire rust flakes	3	0.25	0	12			0			1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_11	R-20_C11	421466.7013	3863345.4590	421466.6276	3863345.369	0.116	0.394	0.394	40.7	71.8	29	34	-1.5	0	01/08/05		CD	Wire								4		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_14	R-20_C9	421463.5799	3863346.7404	421463.5263	3863346.81	0.088	0.217	0.217	30.5	76.0	29	27	0.5	0	01/08/05		GEO	Rock										1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_15	R-20_C23	421466.6270	3863343.2365	421466.6269	3863342.932	0.305	0.152	0.152	40.5	64.5	25	55	0	-0.5	01/08/05		GEO	Rock								0		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_16		421465.8639	3863339.2755	421466.6259	3863339.123	0.777	0.777	0.980	38.0	51.5	20	13	0	0	01/08/05		GEO	Rock			-8	-8				0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_17	R-20_C13	421465.5609	3863345.9787	421465.6243	3863345.928	0.081	0.081	0.081	37.0	73.5	26	31	0	0	01/08/05		GEO	Rock										1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_18	R-20_C31	421467.2570	3863338.5284	421467.5402	3863338.666	0.315	0.467	0.467	42.6	49.0	22	33	-0.5	1	01/08/05		CD	Wire	6							0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_20	R-20_C10	421464.7992	3863346.8928	421464.7991	3863346.588	0.305	0.305	0.305	34.5	76.5	21	25	0	0	01/08/05		CD	6' wire	6	0.25					0			1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_21	R-20_C22	421462.0526	3863334.4005	421462.0526	3863334.401	0.000	0.000	0.000	25.5	35.5	20	11	0	0	01/08/05		CD	Rock/wire	12							0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_22	R-20_C17	421464.4949	3863348.8733	421464.3425	3863349.026	0.215	0.215	0.215	33.5	83.0	18	25	0	0	01/08/05		CD	Wire	19	0.25						2		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_23		421458.0434	3863338.4468						12.3	48.8	16	21	0	0	01/08/05		GEO	Rock								0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_24		421467.5427	3863348.1115						43.5	80.5	17	17	0.5	-0.5	01/08/05		GEO	Rock			9	0				6		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_25	R-20_C16	421459.3124	3863345.6740	421459.3124	3863345.522	0.152	0.152	0.152	16.5	72.5	18	16	0	0	01/08/05		CD	Wire/rock	24							1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_25		421459.3124	3863345.6740	421458.8554	3863346.283	0.762	0.762	0.762	16.5	72.5	18	16	0	0	01/08/05		CD	Wire/rock	24							1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_26		421463.8833	3863341.4084						31.5	58.5	13	3	1.5	0	01/08/05		GEO	Rock								0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_27	R-20_C20	421464.1903	3863349.6350	421464.3428	3863349.787	0.216	0.216	0.216	32.5	85.5	15	20	0	0	01/08/05		CD	Wire - Part of 22										1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_29	R-20_C28	421459.1738	3863340.5784	421459.18	3863340.504	0.075	0.177	0.177	16.0	55.8	15	16	-0.5	-0.5	01/08/05		CD	Wire	12							0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_4	R-20_C21	421471.6340	3863349.3255	421471.5834	3863349.46	0.143	0.143	0.054	56.9	84.5	53	42	0	0	01/08/05		CD	Nails / 3' wire	36	0.25	0	6				3		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_40		421460.5316	3863345.5217						20.5	72.0	10	5	0	0	01/08/05		GEO	Rock								1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_41	R-20_C29	421467.3889	3863343.0842	421467.5414	3863343.084	0.152	0.152	0.152	43.0	64.0	9	41	0	0	01/08/05		GEO	Rock								7		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_42		421469.3717	3863348.8733						49.5	83.0	9	8	0.7	1	01/08/05		GEO	Rock			-12	0				2		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_43		421467.3899	3863346.5881						43.0	75.5	9	11	0	0	01/08/05		GEO	Rock								3		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_45		421457.1807	3863352.6819						9.5	95.5	7	6	-0.5	-2	01/08/05		GEO	Rock								1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_46		421464.1883	3863342.1701						32.5	61.0	7	17	0	-1	01/08/05		GEO	Rock								0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_47		421473.6384	3863346.8928						63.5	76.5	9	10	0.5	-0.5	01/08/05		GEO	Rock (2ea)			6	0				4		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_48		421463.6141	3863342.8075						30.6	63.1	8	13	0	0	01/08/05		CD	Nail	2							2		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_49	R-20_C33	421458.8269	3863352.0760	421459.3142	3863352.073	0.487	0.487	0.573	14.9	93.5	9	4	0	0	01/08/05		GEO	Rock			0	-12				0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_6	R-20_C4	421457.1797	3863349.0256	421457.0273	3863349.026	0.152	0.152	0.152	9.5	83.5	57	105	0	0	01/08/05		CD	Wire/rock	36							2		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_60		421470.1324	3863343.9982						52.0	67.0	6	3	0.5	0.5	01/08/05		GEO	Rock								2		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_62		421470.2984	3863348.2110						52.5	80.8	6	10	0	0	01/08/05		GEO	Rock								3		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_63		421470.1333	3863347.1975						52.0	77.5	7	10	1	0	01/08/05		GEO	Rock								3		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_64		421454.3208	3863342.5509						0.1	62.2	6	4	0.4	-0.75	01/08/05		GEO	Rock								0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_65		421462.0573	3863351.7678						25.5	92.5	6	10	0	0	01/08/05		CD	Nail	3		0	-6				2		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_67		421466.3233	3863347.5022						39.5	78.5	6	4	0	0	01/08/05		MD	Found out of hole	0.5 x 0.25 x 0.5	0.25						2		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_68	R-20_C39	421472.9068	3863345.8769	421473.0284	3863345.674	0.237	0.400	0.489	61.1	73.2	7	10	1	0.5	01/08/05		GEO	Rock			6	0						1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_69		421469.5226	3863343.3889						50.0	65.0	6	3	0	0	01/08/05		GEO	Rock								2		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_7	R-20_C6	421464.7985	3863344.4553	421464.9562	3863344.26	0.251	0.251	0.195	34.5	68.5	46	121	0	0	01/08/05		CD	Nail/rock	1.5		6	0				2		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_70		421475.0101	3863347.3498						68.0	78.0	6	7	0	1	01/08/05		CD	Rock - electric live wire								1		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_71		421470.1315	3863340.7990						52.0	56.5	6	9	-2.3	0	01/08/05		GEO	Rock								6		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_73		421461.4461	3863345.8264						23.5	73.0	5	5	-0.5	-0.5	01/08/05		CD	Wire/nail	3							0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_74		421460.2257	3863341.5607						19.5	59.0	5	11	0	-1	01/08/05		CD	Wire	2							0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_75		421456.2261	3863353.9816						6.4	99.8	5	7	0.5	0	01/08/05		GEO	Rock			9	0						1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_76		421454.3122	3863346.2253						0.1	74.3	4	3	0.3	-2.5	01/08/05		GEO	Rock								0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_77		421463.2755	3863348.2639						29.5	81.0	5	3	1.5	-0.5	01/08/05		GEO	Rock			-6	0			0			1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_78	R-20_C42	421468.4558	3863343.0842	421468.4557	3863342.932	0.152	0.457	0.610	46.5	64.0	5	7	0	-2	01/08/05		GEO	Rock			0	-6				8		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP

Dig Results for 15 January 2005 SOW Analysis

anomaly id	associate	interpreted easting	interpreted northing	associate interpreted easting	associate interpreted northing	distance from sum to associate, m	distance from sum to reacquired, m	distance from sum to investigation, m	interpreted local easting, ft	interpreted local northing, ft	interpreted max amplitude, mV	reacquired max amplitude, mV	reacquisition offset x, ft	reacquisition offset y, ft	reacquisition date	reacquisition comments	anomaly type	description	dimension, in		weight, lbs	dig offset x, in	dig offset y, in	Orient of nose	Inclin of nose	depth to top, in	depth to center of mass, in	photo	dig date	dig team initials	pass dig qc	dig qc initials	dig qc date	post dig geo agree	post dig geo initials
R-20_8	R-20_C32	421458.7912	3863338.2559	421458.914	3863338.231	0.125	0.125	0.125	14.8	48.2	33	21	0	0	01/08/05		CD	18" wire/rock				0	30				0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_81		421466.0201	3863353.2913						38.5	97.5	5	5	0.5	1	01/08/05		CD	Wire				0	30				2		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_82		421462.8174	3863344.7599						28.0	69.5	5	3	0.5	0	01/08/05		GEO	Rock									0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
R-20_9		421458.1271	3863347.5884	421458.3984	3863347.045	0.607	0.607	0.607	12.6	78.8	35	50	0	0	01/08/05		CD	Wire/rock	12								1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP
S-16_126		421336.0503	3863364.0220						11.9	32.6	4	15	0	0	01/12/05		GEO	Geo soil								0	1		1/13/2005	DRG				YES	AJP
S-16_18	S-16_C10	421342.5000	3863354.5000	421342.4634	3863354.388	0.118	0.123	0.123	33.1	1.4	15	46	-0.5	-0.5	01/13/05		CD	#5 wood w/screws	3 x 3		0.25					3	4		1/13/2005	DRG				YES	AJP
S-16_2	S-16_C5	421352.0000	3863363.0000	421352.0635	3863362.917	0.105	0.105	0.136	64.3	29.3	80	33	0	0	01/13/05		CD	Mechanical part	4 x 2		2.5	0	-8			2.5	3		1/13/2005	DRG				YES	AJP
S-16_21	S-16_C3	421338.6000	3863354.1000	421338.807	3863354.084	0.208	0.208	0.158	20.3	0.1	21	41	0	0	01/13/05		CD	Aluminum can pieces	2.5		0.25	4	4			3	4		1/13/2005	DRG				YES	AJP
S-16_22	S-16_C20	421351.7500	3863358.7500	421351.6053	3863358.651	0.175	0.486	0.344	63.5	15.3	15	22	0	1.2	01/13/05		CD	Chain	10		1	0	-6			4	4		1/13/2005	DRG				YES	AJP
S-16_26	S-16_C8	421356.7500	3863363.5000	421356.634	3863363.373	0.172	0.190	0.190	79.9	30.9	16	20	-1	-0.5	01/13/05		GEO	Geo soil											1/13/2005	DRG				YES	AJP
S-16_3	S-16_C9	421359.7500	3863355.0000	421359.8311	3863355.145	0.166	0.166	0.092	89.7	3.0	34	43	0	0	01/13/05		MD	MK II practice - no fuze (fired)	3.5 x 2.25		2.5	0	4	W	15	3	4		1/13/2005	DRG				YES	AJP
S-16_45		421334.2500	3863358.5000						6.0	14.5	8	9	0	0	01/12/05		GEO	Geo soil											1/13/2005	DRG				YES	AJP
S-16_53		421341.5000	3863360.7500						29.8	21.9	7	5	-1	0.5	01/12/05		GEO	Geo rock	1 x 1		0.25	4	4			2	2.5		1/13/2005	DRG				YES	AJP
S-16_57		421361.7216	3863359.3354						96.2	17.3	6	12	-0.5	-1	01/12/05		CD	Nail	4		0.25	-8	-8			1	3		1/13/2005	DRG				YES	AJP
S-16_6	S-16_C16	421350.6905	3863355.9520	421350.5381	3863355.757	0.247	0.158	0.300	60.0	6.1	26	40	-1	-0.5	01/13/05		MD	MK II fuze/frag	1 x 1		0.25	-4	4	0	0	6	6.5		1/13/2005	DRG				YES	AJP
S-16_7	S-16_C11	421337.4376	3863365.3096	421337.4388	3863365.206	0.103	0.201	0.049	16.5	36.8	29	56	0	-1	01/13/05		MD	MK II practice - with fuze (fired)	4.5 x 2.25		2.5	0	6	S	45	5	6		1/13/2005	DRG				YES	AJP
S-16_70		421335.7500	3863365.7500						11.0	38.3	5	12	-1.5	-0.5	01/12/05		GEO	Geo soil								0	5		1/13/2005	DRG				YES	AJP
S-16_71		421345.2500	3863358.5000						42.1	14.5	6	3	0	0	01/12/05		GEO	Geo soil	1 x 2		0.25					2	3		1/13/2005	DRG				YES	AJP
S-16_83		421341.5722	3863371.7277						30.1	57.9	5	5	-0.5	-0.5	01/12/05		CD	2 nails	2		0.25	0	3			1	1		1/13/2005	DRG				YES	AJP
S-16_91		421357.0000	3863355.5000						80.7	4.7	5	12	0.5	-0.5	01/12/05		GEO	Weld rod	3 x 0.125		0.25	6	0			1	2.5		1/13/2005	DRG				YES	AJP
S-18_1	S-18_C1	421413.7151	3863365.8457	421413.6115	3863365.791	0.117	0.117	0.117	66.8	38.7	207	475	0	0	01/08/05		CD	1/2" pipe	30	2						0			1/12/2005	RLF				YES	AJP
S-18_11		421420.3167	3863370.6685						88.5	54.5	18	22	0	0	01/08/05		CD	Clevis pin		2	0.25					0			1/12/2005	RLF				YES	AJP
S-18_15		421422.1408	3863355.7380						94.5	5.5	8						CD	Survey Nail	9		0.5							1	1/12/2005	RLF					
S-18_16	S-18_C14	421393.3552	3863384.3867	421393.3552	3863384.539	0.152	0.152	0.152	0.0	99.5	8	4	0	0	01/08/05		NC	Non-ferrous											1/12/2005	RLF				YES	AJP
S-18_16	T-18_C10	421393.3552	3863384.3867	421393.3552	3863384.539	0.152	0.152	0.152	0.0	99.5	8	4	0	0	01/08/05		NC	Non-ferrous											1/12/2005	RLF				YES	AJP
S-18_19		421407.4970	3863360.0398						46.4	19.6	6	10	0	0	01/08/05		GEO	Hot dirt								8			1/12/2005	RLF				YES	AJP
S-18_2	S-18_C3	421420.7171	3863374.8664	421420.8096	3863374.535	0.344	0.639	0.639	89.8	68.3	186	390	0.5	1	01/08/05		NC	Non-ferrous											1/12/2005	RLF				YES	AJP
S-18_20		421416.6623	3863377.6774						76.5	77.5	5	3	0	0	01/08/05		GEO	Hot dirt				-6	0			6			1/12/2005	RLF				YES	AJP
S-18_4	S-18_C5	421423.1140	3863374.0314	421423.0598	3863374.019	0.056	0.778	0.778	97.7	65.5	84	88	0.5	-2.5	01/08/05		NC	Non-ferrous											1/12/2005	RLF				YES	AJP
S-18_6	S-18_C6	421419.4739	3863376.0570	421419.47	3863376.03	0.028	0.028	0.277	85.7	72.2	41	55	0	0	01/08/05		CD	1/2" pipe		6	0.5	0	-12			0			1/12/2005	RLF				YES	AJP
S-18_7	S-18_C8	421409.8047	3863370.2143	421409.8047	3863370.214	0.000	0.000	0.000	54.0	53.0	34	50	0	0	01/08/05		CD	Nail, survey		5	0.25					2			1/12/2005	RLF				YES	AJP
S-18_8	S-18_C9	421423.5137	3863362.1364	421423.5136	3863361.984	0.152	0.550	0.550	99.0	26.5	27	24	1.5	0.5	01/08/05		GEO	Rock	7 x 9							1			1/12/2005	RLF				YES	AJP
S-18_9		421417.1990	3863366.8766	421417.1164	3863366.861	0.084	0.084	0.084	78.3	42.1	40				01/08/05	Soda can	NC	Non-ferrous											1/12/2005	RLF				YES	AJP
S-19_106	S-19_C95	421427.0215	3863378.8942	421427.0215	3863378.894	0.000	0.482	0.482	10.5	81.5	10	4	-1.5	0.5	01/09/05		CD	Small wire								0			1/11/2005	RLF				YES	AJP
S-19_110	S-19_C27	421427.4775	3863374.9331	421427.4775	3863374.933	0.000	0.000	0.000	12.0	68.5	13	32	0	0		Can	CD	Beer can								0			1/11/2005	RLF				YES	AJP
S-19_12	S-19_C8	421438.1846	3863370.9138	421438.2725	3863371.021	0.138	0.138	0.138	47.1	55.3	77	100	0	0	01/09/05		CD	Barb wire		13	0.25	0	0			1			1/11/2005	RLF				YES	AJP
S-19_12.1		421438.1846	3863370.9138						47.1	55.3	77	100	0	0	01/09/05		CD	Barb wire		13	0.25	0	0			1			1/11/2005	RLF					
S-19_120		421443.0128	3863363.3515						63.0	30.5	10	12	0	0	01/09/05		CD	Nail				0	-24			1			1/11/2005	RLF				YES	AJP
S-19_123	S-19_C70	421443.4697	3863362.5895	421443.4697	3863362.894	0.305	0.305	0.682	64.5	28.0	10	15	0	0	01/09/05		CD	Wire				-24	0			1			1/11/2005	RLF				YES	AJP
S-19_124		421436.6169	3863377.2182						42.0	76.0	7	4	0	0	01/09/05		CD	Nail	4							2			1/12/2005	RLF				YES	AJP
S-19_125		421432.8094	3863379.1990						29.5	82.5	8	5	0	-0.5	01/09/05		CD	Wire brush wires - Shared with 143								1			1/11/2005	RLF				YES	AJP
S-19_13	S-19_C20	421442.4025	3863354.5136	421442.4427	3863354.675	0.166	0.381	0.381	61.0	1.5	97	102	-1	0	01/09/05		CD	Wire		144	0.25					0			1/11/2005	RLF				YES	AJP
S-19_130		421425.1914	3863369.9057						4.5	52.0	6	5	0.5	0	01/09/05		CD	1/4" cable		3		-2	-2			1			1/11/2005	RLF				YES	AJP
S-19_131		421449.4112	3863371.2746						84.0	56.5	9	3	0	0	01/09/05		NC												1/11/2005	RLF					
S-19_132		421435.2454	3863372.9520						37.5	62.0	6	6	0	0	01/09/05		NC												1/11/2005	RLF					
S-19_137		421426.5658	3863384.0741						9.0	98.5	5	3	0	0	01/09/05		CD	Nail		1.5						1			1/11/2005	RLF				YES	AJP
S-19_138		421445.7553	3863369.7511						72.0	51.5	6	6.5	0	0	01/09/05		CD	Wire		2						0			1/11/2005	RLF				YES	AJP
S-19_139		421451.7687	3863365.2888						91.7	36.9	6	4	1	-0.5	01/09/05		CD	Wire loop								2			1/11/2005	RLF				YES	AJP
S-19_140	S-19_C82	421447.5829	3863364.4174	421447.1259	3863364.265	0.482	0.482	0.482	78.0	34.0	8	10	0	0	01/09/05		CD	Small								1			1/11/2005	RLF				YES	AJP
S-19_141		421429.3034	3863366.2488						18.0	40.0	6	5.5	0	0	01/09/05		GEO	Hot dirt								6			1/12/2005	RLF				YES	AJP
S-19_142		421452.6098	3863361.2162						94.5	23.5	6	12	0	-1	01/09/05		CD	Nail		3		0	18			2			1/11/2005	RLF				YES	AJP
S-19_143		421432.5045	3863377.8277						28.5	78.0	6	4	0	0	01/09/05		CD	Wire brush wires - Shared with 125								1			1/11/2005	RLF				YES	AJP
S-19_149		421430.8289	3863377.0659						23.0	75.5	5	3	-1	0.5	01/09/05		NC												1/11/2005	RLF					
S-19_2	S-19_C2	421453.5389	3863367.1371	421453.2374	3863367.03	0.320	0.320	0.320	97.5	42.9	628	550	0	0	01/09/05	Metal pipe	CD	1" rod pipe		36	1					0			1/11/2005	RLF				YES	AJP
S-19_2		421453.5389	3863367.1371	421453.9808	3863366.245	0.996	0.996	0.996	97.5	42.9	628	550	0	0	01/09/05	Metal pipe	CD	1" rod pipe		36	1					0			1/11/2005	RLF				YES	AJP
S-19_22	S-19_C22	421452.1527	3863356.9491	421452.1527	3863356.949	0.000	0.000	0.000	93.0	9.5	46	95	0	0	01/09/05		CD	Wire		8	0.25					2			1/11/2005	RLF				YES	AJP
S-19_28	S-19_C18	421441.0324	3863362.7423	421440.7277	3863362.59	0.341	0.341	0.341	56.5	28.5	42	50	0	0	01/09/05		CD	Nail, multiple			0.5					2			1/11/2005	RLF				YES	AJP
S-19_28		421441.0324	3863362.7423	421441.6417	3863362.285	0.762	0.762	0.762	56.5	28.5	42	50	0	0	01/09/05		CD	Nail, multiple			0.5					2			1/11/2005	RLF				YES	AJP
S-19_29	S-19_C102	421428.5756	3863370.5448	421428.8474	3863370.667	0.298	0.506	0.506	15.6	54.1	33	64	0	-1	01/09/05		CD	Wire		36	0.25					1			1/11/2005	RLF				YES	AJP
S-19_29	S-19_C90	421428.5756	3863370.5448	421428.3904	3863370.82	0.331	0.608	0.608	15.6	54.1	33	64	0	-1	01/09/05		CD	Wire		36	0.25					1			1/11/2005	RLF				YES	AJP
S-19_3	S-19_C3	421427.0162	3863357.1081	421427.0162	3863357.26	0.152	0.628	0.628	10.5	10.0	369	265	0.5	-1.5	01/09/05		CD	1/2" rod		36	1					1			1/11/2005	RLF				YES	AJP
S-19_30	S-19_C16	421433.6820	3863372.0183	421433.4494	3863371.81	0.312	0.563	0.563	32.4	58.9	45	45	0	1	01/09/05		CD	Horse shoe		0.25	0.25					2			1/11/2005	RLF				YES	AJP
S-19_31	S-19_C59	421448.1918	3863356.6454	421448.0394	3863356.798	0.216	0.216	0.216	80.0	8.5	31	31	0	0	01/09/05		CD	Nail		6						0			1/11/2005	RLF				YES	AJP
S-19_32	S-19_C33	421444.2533	3863364.6838	421444.4505	3863364.511	0.262	0.677	0.677	67.1	34.9	37	52	-1.5	0	01/09/05		CD	Nails								1			1/11/2005	RLF				YES	AJP
S-19_36	S-19_C32	421437.4989	3863357.4176	421437.5177	3863357.357	0.063	0.292	0.292	44.9	11.0	35	68	1	0	01/09/05		CD	Wire		24	0.25					0			1/11/2005	RLF				YES	AJP
S-19_40		421451.0862	3863354.5111						89.5	1.5	31	26	0.5	0	01/09/05		CD	Wire		12						0			1/11/2005	RLF				YES	AJP
S-19_44	S-19_C87	421432.3144	3863362.1386	421432.3004	3863362.209	0.072	0.072	0.072	27.9	26.5	23	22	0	0	01/09/05		CD	Nail		2						0			1/11/2005	RLF				YES	AJP
S-19_47	S-19_C44	421436.6161	3863371.8853	421436.6161	3863371.885	0.000	0.549	0.889	42.0	58.5	27	20	1.5	1	01/09/05		CD	Wire		18		0	18			1			1/11/2005	RLF				YES	AJP
S-19_49	S-19_C52	421440.4232	3863364.4186	421440.7279	3863364.419	0.000	0.305	0.305	54.5	34.0	22	37	0	0	01/09/05		CD	Wire		10						1			1/11/2005	RLF				YES	AJP
S-19_5	S-19_C30	421443.3167	3863355.8848	421443.5011	3863356.043	0.243	0.189	0.189	64.0	6.0	183	175	1	1	01/09/05		CD	Bracket	6 x 18		0.25					2			1/11/2005	RLF				YES	AJP
S-19_50	S-19_C13	421424.3536	3863379.9402	421424.3316	3863380.033	0.095	0.340	0.368	1.7	84.9	34	50	1	0	01/09/05		GEO	Rock	4 x 5			0	-3			4			1/12/2005	RLF				YES	AJP
S-19_61	S-19_C73	421445.1459	3863369.1417	421445.2983	3863369.142	0.152	0.152	0.762	70.0	49.5	15	78	0	0	01/09/05		CD	Wire		8		-24	0			2			1/11/2005	RLF				YES	AJP
S-19_62	S-19_C49	421445.2002	3863364.8095	421445.2979	3863364.875	0.118	0.118	0.118	70.2	35.3	21	18	0	0	01/09/05		CD	Wire		14						2			1/11/2005	RLF				YES	AJP
S-19_92	S-19_C31	421427.9345	3863375.3901	421427.9346	3863375.543	0.152	0.341	0.341	13.5	70.0	16	32	0.5	-0.5	01/09/05	Beer can	CD	Wire		18						0			1/11/2005	RLF				YES	AJP
S-19_95	S-19_C29	421425.1874	3863354.3663	421425.1875	3863354.671	0.305	0.305	1.219	4.5	1.0	31				01/09/05	No contact	GEO	Rock				0	-36			0			1/11/2005	RLF				YES	AJP
S-20_1		421459.3147	3863362.4350	421459.421	3863362.436	0.106	1.418	1.418	16.5	27.5	983	618	5	0	01/08/05		CD	1/2 conduit		48	0.5					0			1/11/2005	RLF				YES	AJP
S-20_10	S-20_C8	421457.3335	3863361.8254	421457.4859	3863361.673	0.216	0.216	0.216	10.0	25.5	63	128	1	0	01/08/05		CD	Wire		120	0.25					0			1/12/2005	RLF				YES	AJP
S-20_11	S-20_C33	421464.9535	3863357.1010	421464.8643	3863356.846	0.270	0.221	0.221	35.0	10.0	40	43	0	-1.5	01/08/05		CD	2 nails			0.25					1			1/11/2005	RLF				YES	AJP
S-20_12	S-20_C40	421460.9435	3863361.1273	421461.1382	3863361.122	0.195	0.381	0.381	21.8	23.2	39	35	-0.5	0.5	01/08/05		GEO	Rock								1			1/11/2005	RLF				YES	AJP
S-20_13	S-20_C29	421463.8867	3863358.0154	421463.8787	3863357.797	0.218	0.066	0.066	31.5	13.0	33	51	0	-0.5	01/08/05		CD	Nail		7	0.25					8			1/11/2005	RLF				YES	AJP
S-20_14	S-20_C25	421460.2945	3863365.6337	421460.2291	3863365.788	0.167	0.218	0.218	19.7	38.0	27	50	0.5	0.5	01/08/05		CD	Tin		8	0.25					0			1/11/2005	RLF				YES	AJP
S-20_15	S-20_C24	421460.8387	3863364.8734	421460.6863	3863365.026	0.216	0.000	0.457	21.5	35.5	29	45	-0.5	0.5	01/08/05		CD	Wire		12	0.25	0	18			0			1/11/2005	RLF				YES	AJP
S-20_18		421457.6383	3863366.2450						11.0	40.0	23	38	0.5	1	01/08/05		CD	Nail		5		0	0			0			1/11/2005	RLF				YES	AJP
S-20_18		421457.6383	3863366.2450						11.0	40.0	23	38	0.5	1	01/08/05		CD	Nail		5		0	0			0			1/11/2005	RLF				YES	AJP
S-20_20	S-20_C13	421462.2103	3863356.1866	421462.0579	3863356.187	0.152	0.152	0.152	26.0	7.0	25	32	0	0	01/08/05		CD	Wire		30	0.25					0			1/11/2005	RLF				YES	AJP
S-20_24		421457.4859	3863357.1010						10.5	10.0	16	42	0	0	01/08/05		CD	1/2 pin			0.25	-6	0			2			1/11/2005	RLF				YES	AJP
S-20_25	S-20_C17	421465.2583	3863360.4538	421465.2583	3863360.606	0.152	0.152	0.457	36.0	21.0	21	16	0	0	01/08/05		CD	Wire		8	0.25	0	-12			0			1/11/2005	RLF				YES	AJP
S-20_26		421456.2667	3863355.5770						6.5	5.0	13	13	0	0	01/08/05		CD	Nail		3	0.25	12	0			1			1/11/2005	RLF				YES	AJP
S-20_27	S-20_C36	421463.7343	3863355.4246	421463.5819	3863355.425	0.152	0.152	0.152	31.0	4.5	17	21	-0.5	-0.5	01/08/05		CD	Wire		12	0.25					1			1/11/2005	RLF				YES	AJP
S-20_29	S-20_C21	421458.2479	3863358.6250	421458.4003	3863358.473	0.216	0.216	0.520	13.0	15.0	15	21	0	0	01/08/05		CD	Wire			0.25	-8	8			2			1/11/2005	RLF				YES	AJP
S-20_3	S-20_C14	421467.8969	3863358.5823	421467.5443	3863358.777	0.403	0.401	0.351	44.7	14.9	107	150	-0.5	-0.5	01/08/05		CD	Flange	2 x 4		0.5	-6	0			0	1		1/11/2005	RLF				YES	AJP
S-20_3		421467.8969	3863358.5823	421467.5443	3863358.015	0.668	0.460	0.417	44.7	14.9	107	150	-0.5	-0.5	01/08/05		CD	Flange	2 x 4		0.5	-6	0			0	1		1/11/2005	RLF				YES	AJP
S-20_30	S-20_C34	421463.5819	3863359.9966	421463.8867	3863359.997	0.305	0.341	0.341	30.5	19.5	14	21	0.5	1	01/08/05		GEO	Rock								2			1/11/2005	RLF				YES	AJP
S-20_35		421457.1811	3863354.8150						9.5	2.5	8	10	1	0	01/08/05		GEO	Rock								0			1/11/2005	RLF				YES	AJP
S-20_38		421456.2667	3863367.3118						6.5	43.5	6	3	0.5	1	01/08/05		GEO	Rock								0			1/11/2005	RLF				YES	AJP
S-20_4	S-20_C4	421462.0579	3863363.3494	421462.0579	3863363.197	0.152	0.216	0.216	25.5	30.5	102	71	0.5	-1	01/08/05		CD	Wire		72	0.25					1			1/11/2005	RLF				YES	AJP
S-20_40		421459.3147	3863355.7294						16.5	5.5	7	5	-1	0	01/08/05		CD	Nail		3	0.25					0			1/11/2005	RLF				YES	AJP
S-20_46		421460.2291	3863358.4726						19.5	14.5	6	5	1	1	01/08/05		CD	Metal	2 x 2		0.25	12	0			0			1/11/2005	RLF				YES	AJP
S-20_8		421454.5784	3863360.7449	421454.7621	3863360.024	0.744	0.744	0.744	1.0	22.0	67	150	0	0	01/08/05		CD	Wire		72	0.25					0			1/11/2005	RLF				YES	AJP
S-20_9	S-20_C16	421454.4670	3863357.4350	421454.7987	3863357.265	0.373	0.659	0.659	0.6	11.1	55	34	-1	0	01/08/05		CD	Brick								1			1/11/2005	RLF				YES	AJP

Dig Results for 15 January 2005 SOW Analysis

anomaly id	associate	interpreted easting	interpreted northing	associate interpreted easting	associate interpreted northing	distance from sum to associate, m	distance from sum to reacquired, m	distance from sum to investigation, m	interpreted local easting, ft	interpreted local northing, ft	interpreted max amplitude, mV	reacquired max amplitude, mV	reacquisition offset x, ft	reacquisition offset y, ft	reacquisition date	reacquisition comments	anomaly type	description	dimension, in	weight, lbs	dig offset x, in	dig offset y, in	Orient of nose	Inclin of nose	depth to top, in	depth to center of mass, in	photo	dig date	dig team initials	pass dig qc	dig qc initials	dig qc date	post dig geo agree	post dig geo initials	post dig geo date
M-22_13	M-22_C12	421520.5311	3863260.7995	421520.2264	3863260.647	0.341	0.628	0.628	17.5	94.0	68	65	1	0	01/08/05		CD	Wire	120	2					1	1		1/10/2005	HEL				YES	AJP	3/5/2005
M-22_21	M-22_C33	421516.8740	3863257.7535	421517.0263	3863257.754	0.152	0.152	0.051	5.5	84.0	31	36	0.5	0.5	01/08/05		GEO	Rock	2 x 2	1	0	-8			4	6		1/10/2005	HEL						
M-22_23		421518.5508	3863261.2570						11.0	95.5	30	31	1	0	01/08/05		GEO	Rocks	4 x 4	1	-10	0			0	8		1/10/2005	HEL				YES	AJP	3/5/2005
M-22_26	M-22_C36	421517.3316	3863259.7339	421516.9975	3863259.795	0.340	0.496	0.386	7.0	90.5	31	47	0	-1	01/08/05		GEO	Rock	8 x 8	10	-18	0			3	10		1/10/2005	HEL				YES	AJP	3/5/2005
M-22_3	M-22_C4	421522.8119	3863244.1933	421522.5073	3863244.498	0.431	0.431	0.341	25.0	39.5	293	315	0	0	01/08/05		CD	Barb wire	240	2	-6	0			1	1		1/10/2005	HEL				YES	AJP	3/5/2005
M-22_33		421516.8744	3863259.1246						5.5	88.5	22	25	0	0	01/08/05		GEO	Rock	5 x 5	5	8	0			4	10		1/10/2005	HEL				YES	AJP	3/5/2005
M-22_36	M-22_C59	421526.6225	3863251.5048	421526.6225	3863251.505	0.000	0.000	0.305	37.5	63.5	18	20	0	0	01/08/05		GEO	Rock confirmed during Phase II	5	0.5	-12	0			6	9		1/10/2005	HEL				YES	AJP	3/5/2005
M-22_38	M-22_C38	421523.2731	3863259.7323	421523.4254	3863259.732	0.152	0.216	0.482	26.5	90.5	21	18	1	-0.5	01/08/05		GEO	Rocks	5 x 5	10	12	0			4	9		1/10/2005	HEL				YES	AJP	3/5/2005
M-22_4	M-22_C3	421523.5737	3863244.6501	421523.4213	3863244.498	0.215	0.000	0.152	27.5	41.0	291	400	-0.5	-0.5	01/08/05		CD	Barb wire	240	2	6	0			1	1		1/10/2005	HEL				YES	AJP	3/5/2005
M-22_40	M-22_C28	421521.7436	3863237.1857	421521.5912	3863237.033	0.215	0.646	0.482	21.5	16.5	19	22	1	1	01/08/05		CD	Barb wire	10	0.5	0	-12			8	12		1/10/2005	HEL				YES	AJP	3/5/2005
M-22_50		421526.1643	3863247.3916						36.0	50.0	12	6	0	0	01/08/05		GEO	Rock	4 x 5	5	14	0			8	10		1/10/2005	HEL				YES	AJP	3/5/2005
M-22_63		421524.7906	3863237.6419						31.5	18.0	10	10	-1	0.5	01/08/05		GEO	Rock	2 x 3 x 2	0.5	-24	0			4	5		1/10/2005	HEL				YES	AJP	3/5/2005
M-22_64		421524.7936	3863248.7631						31.5	54.5	9	16	0	1	01/08/05		GEO	Rocks		15	0	-18			3	15		1/10/2005	HEL				YES	AJP	3/5/2005
M-22_76	M-22_C56	421523.2661	3863233.6813	421523.4184	3863233.681	0.152	0.000	0.000	26.5	5.0	7	20	0.5	0	01/08/05		CD	Barb wire	12	0.5			N	N/A	3	3		1/10/2005	HEL				YES	AJP	3/5/2005
M-22_9	M-22_C7	421517.4847	3863262.4578	421517.4846	3863262.324	0.134	0.134	0.134	7.5	99.4	110	160	0	0	01/08/05		CD	Barb wire fond during Phase II initially geology	60	2					3	3		1/10/2005	HEL				YES	AJP	3/5/2005
N-21_1	N-21_C1	421514.2725	3863278.6738	421514.4452	3863278.272	0.437	0.492	0.378	96.9	52.7	785	400	1.5	0	01/09/05		CD	Wire fence	60	3	0	-6			0	0		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_14		421509.4176	3863289.7488						81.0	89.0	74	51	0.5	1	01/09/05		CD	Hinge and wire	2 x 6	2	0	-24			1	1		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_21	N-21_C41	421510.6360	3863288.0726	421510.7883	3863287.92	0.215	0.152	0.482	85.0	83.5	39	55	0.5	0	01/09/05		CD	Hinge	2 x 6	2	18	0			2	4		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_23		421504.0700	3863282.5367						63.5	65.3	39	60	0	0	01/09/05		CD	Wire/rock	120	2	0	10			0	2		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_26	N-21_C42	421513.2014	3863262.7289	421513.0666	3863262.63	0.167	0.167	0.167	93.4	0.3	31	148	0	0	01/09/05		CD	Wire	20	1					2	8		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_3	N-21_C2	421514.1690	3863282.7826	421514.0879	3863282.482	0.312	0.793	0.793	96.6	66.1	243	102	0.5	1.5	01/09/05		CD	Wire	25	2					0	0		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_36	N-21_C26	421511.6237	3863280.2600	421511.7002	3863280.15	0.134	0.134	0.134	88.2	57.9	16	25	0	0	01/09/05		CD	Wire	20	1					1	1		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_38		421503.9304	3863279.5430						63.0	55.5	16						CD	Spike	8	1	2	0			2	6		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_45	N-21_C36	421510.8021	3863264.6494	421510.7563	3863264.688	0.060	0.123	0.135	85.6	6.6	14	24	0	0.5	01/09/05		GEO	Rocks	5 x 5	10	1	0			4	8		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_47		421514.9016	3863287.9557						99.0	83.1	11	12	0	0	01/09/05		CD	Wire	15	1	0	4			0	2		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_49		421513.9836	3863273.1415						96.0	34.5	12	15	0	-1	01/09/05		CD	Nail	2	0.1	0	-6			2	3		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_5	N-21_C6	421509.7177	3863272.6855	421509.8701	3863272.686	0.152	0.341	0.341	82.0	33.0	152	160	1.5	0.5	01/09/05		CD	Survey spike	10	1					1	5		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_51	N-21_C40	421501.1528	3863292.0927	421501.1915	3863291.884	0.212	0.214	0.214	53.9	96.7	11	17	-0.5	-1	01/09/05		GEO	Rock	6 x 6	5					0	4		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_52		421510.0259	3863285.4828						83.0	75.0	10	14	1	0	01/09/05		GEO	Rock	4 x 4	2	0	2			1	4		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_54		421512.9163	3863269.9424						92.5	24.0	12	6	0	0	01/09/05		GEO	Rock	4 x 4	5					1	3		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_57		421511.4743	3863271.4749						87.8	29.0	10	11	0	0	01/09/05		GEO	Rock	5 x 5	5					2	4		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_6	N-21_C7	421509.5788	3863281.2414	421509.1107	3863281.37	0.485	0.485	0.485	81.5	61.1	119						CD	Wire and nails		5					0	3		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_60		421514.5015	3863276.6287						97.7	45.9	9	5	0	1	01/09/05		CD	Shared with #1	60									1/11/2005	HEL	Yes	HEL	01/2005			
N-21_61		421502.9458	3863290.4413						59.8	91.3	8	15	1	0	01/09/05		GEO	Rock	4 x 4	3					1	3		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_62		421507.3891	3863286.3756						74.3	77.9	7	14	-0.5	1	01/09/05		CD	Wire	20	1					1	2		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_7	N-21_C5	421512.1558	3863274.5131	421512.1557	3863274.361	0.152	0.305	0.356	90.0	39.0	99	67	0	0.5	01/09/05		CD	Wire	28	1	0	2			0	4		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_8	N-21_C21	421512.7631	3863266.7431	421512.7631	3863266.743	0.000	0.341	0.628	92.0	13.5	87	115	1	-0.5	01/09/05		CD	Wire	15	1	12	0			1	3		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_91		421503.0176	3863284.2659						60.0	71.0	3	3	0	0	01/09/05		GEO	Rock	3 x 3	3	-2	0			0	2		1/11/2005	HEL	Yes	HEL	01/2005			
N-21_93		421504.3906	3863291.4260						64.5	94.5	4	3	1	-0.5	01/09/05		GEO	Rock	2 x 2	2	0	6			0	1		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_10	N-22_C8	421524.3485	3863292.3348	421524.4305	3863292.311	0.085	0.388	0.388	30.0	97.5	43	3	-1	0	01/09/05		NC											1/11/2005	HEL	Yes	HEL	01/2005			
N-22_100		421540.3377	3863264.4504						82.5	6.0	3				01/09/05	No contact	CD	Nail	2	0.1	8	0			2	4		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_102		421515.9661	3863280.6061						2.5	59.0	3	5	0	0	01/09/05		GEO	Rock	3 x 3	2	20	0			0	2		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_105		421516.4221	3863276.5687						4.0	45.8	2	103	0.5	0.5	01/09/05		GEO	Rocks	10 x 10	15					0	10		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_106		421528.9150	3863277.5129						45.0	48.9	3	3	-0.75	0	01/09/05		GEO	Rock	3 x 3	2	2	0			0	3		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_108		421527.9992	3863271.0048						42.0	27.5	3	4	0	0	01/09/05		GEO	Rock	3 x 3	2					0	3		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_12	N-22_C7	421518.0947	3863264.7611	421518.0947	3863264.761	0.000	0.216	0.183	9.5	7.0	45	85	0.5	-0.5	01/09/05		CD	Nails / Rock		1	-2	0			6	6		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_16	N-22_C14	421523.4265	3863263.0838	421523.4681	3863262.938	0.151	0.477	0.477	27.0	1.5	31	25	0.5	-2	01/09/05		CD	Wire	60	0.5					3	3		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_19	N-22_C26	421520.2343	3863289.4413	421520.1992	3863289.41	0.047	0.493	0.950	16.5	88.0	24	29	1.5	0	01/09/05		CD	Nail	4	1	18	0			2	4		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_21		421520.6855	3863267.8074						18.0	17.0	21	26	0	0	01/09/05		CD	Wire	24	1	10	0			0	2		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_24	N-22_C3	421539.8839	3863276.2577	421539.8838	3863276.182	0.076	0.766	1.025	81.0	44.8	32	7	2.5	0	01/09/05		CD	Nail	4	0.1	0	-30			4	6		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_26	N-22_C33	421524.3417	3863267.1970	421524.5667	3863267.127	0.236	0.243	0.243	30.0	15.0	18	28	1.5	0	01/09/05		CD	Nail	2	0.1					0	2		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_27		421517.9496	3863291.5748						9.0	95.0	15	20	0	0	01/09/05		CD	Old fire		0					3	4		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_29	N-22_C30	421522.5164	3863277.7097	421522.5164	3863277.71	0.000	0.000	0.000	24.0	49.5	16	25	0	0	01/09/05		CD	Nail	2	0.1					0	2		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_3	N-22_C9	421528.4569	3863273.5946	421528.4445	3863273.767	0.173	0.173	0.194	43.5	36.0	116	124	0	0	01/09/05		CD	Wire	24	2	3	0			0	6		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_30	N-22_C10	421539.5777	3863270.6970	421539.5777	3863270.697	0.000	0.305	0.610	80.0	26.5	19	24	1	0	01/09/05		CD	Wire	12	0.5	12	0			0	0		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_31		421519.0112	3863273.5972						12.5	36.0	13	18	0.5	-0.5	01/09/05		CD	Metal	1	1					3	4		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_33		421523.8869	3863275.5764						28.5	42.5	12	19	0	0	01/09/05		GEO	Rock	4 x 4	5	12	0			3	4		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_37	N-22_C40	421524.6474	3863270.8534	421524.4951	3863270.853	0.152	0.152	0.152	31.0	27.0	10	18	0	0	01/09/05		CD	Nail	2	0.1					0			1/11/2005	HEL	Yes	HEL	01/2005			
N-22_4	N-22_C4	421516.1144	3863265.5234	421516.1144	3863265.523	0.000	0.341	0.341	3.0	9.5	76	125	1	-0.5	01/09/05		CD	Wire	24	2					0	2		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_5	N-22_C23	421518.4048	3863284.5665	421518.4078	3863284.719	0.152	0.152	0.025	10.5	72.0	62	108	0	0	01/09/05		CD	Bolt	8	1.5	0	5			2	4		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_6	N-22_C5	421523.4334	3863288.6786	421523.5039	3863288.65	0.076	0.076	0.076	27.0	85.5	64				01/09/05	No contact	NC											1/11/2005	HEL	Yes	HEL	01/2005			
N-22_60	N-22_C39	421525.2552	3863264.9115	421525.2552	3863264.759	0.152	0.000	0.203	33.0	7.5	4	5	0	-0.5	01/09/05		GEO	Rocks	5 x 5	5	8	0			0	3		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_7	N-22_C15	421524.8013	3863276.4903	421524.8284	3863276.426	0.069	0.069	0.069	31.5	45.5	44	69	0	0	01/09/05		CD	Wire	24	1					0	6		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_72		421528.0028	3863284.4116						42.0	71.5	4	2.5	-0.5	-0.5	01/09/05		NC											1/11/2005	HEL	Yes	HEL	01/2005			
N-22_8	N-22_C19	421521.7587	3863293.0972	421521.6446	3863292.917	0.214	0.214	0.400	21.5	100.0	48	88	0	0	01/09/06		CD	Hinge	2 x 4	1	0	8			2	4		1/11/2005	HEL	Yes	HEL	01/2005			
N-22_9	N-22_C11	421522.0586	3863275.1199	421522.1728	3863275.094	0.117	0.117	0.138	22.5	41.0	45	83	0	0	01/09/05		GEO	Rock	2 x 2	0.5	0	2			2	3		1/11/2005	HEL	Yes	HEL	01/2005			
P-16_10	P-16_C10	421339.2488	3863297.7164	421339.0964	3863297.564	0.215	0.152	0.282	22.5	15.0	154	210	-0.5	0	01/11/05		CD	Paint can / weld rods	8 x 7	1	-4	4			4	8		1/13/2005	DRG				YES	AJP	3/5/2005
P-16_17	P-16_C25	421338.3337	3863293.9080	421338.3337	3863293.908	0.000	0.341	0.628	19.5	2.5	57	87	0.5	1	01/11/05		CD	Weld rod	20	0.25	0	12			4	4		1/12/2005	DRG				YES	AJP	3/5/2005
P-16_23		421348.3885	3863293.7527						52.5	2.0	31	25	0	0	01/11/05		GEO	Rock	1 x 1	0.25	3	0			2	3		1/12/2005	DRG				YES	AJP	3/5/2005
P-16_24	P-16_C32	421340.9251	3863299.3917	421340.7727	3863299.239	0.215	0.410	0.521	28.0	20.5	28	49	0.75	0	01/11/05		CD	Weld rods	6 x 4	0.25	0	8			3	4		1/13/2005	DRG				YES	AJP	3/5/2005
P-16_26		421337.8785	3863300.6113						18.0	24.5	25	40	0	0.75	01/11/05		CD	Hasp/weld rods	3 x 2	0.5	8	0			5	5		1/13/2005	DRG				YES	AJP	3/5/2005
P-16_27	P-16_C30	421334.5269	3863300.6123	421334.5269	3863300.612	0.000	0.341	0.397	7.0	24.5	25	25	1	0.5	01/11/05		CD	Hasp/weld rods	7 x 7	0.5	0	4			6	7		1/13/2005	DRG				YES	AJP	3/5/2005
P-16_29	P-16_C34	421338.7946	3863308.2284	421338.7945	3863307.771	0.457	0.457	0.482	21.0	49.5	23	30	0	0	01/11/05		CD	Weld rods	3 x 0.5	0.25	0	1			6	6		1/13/2005	DRG				YES	AJP	3/5/2005
P-16_46		421354.7885	3863298.9306						73.5	19.0	10	13	0	0	01/11/05		CD	Square nail	2 x 0.375	0.2	8	8			0.5	0.5		1/12/2005	DRG				YES	AJP	3/5/2005
P-16_47		421341.6876	3863302.2861						30.5	30.0	10	10	0.5	0.5	01/11/05		CD	Weld rod	6 x 0.187	0.25	-6	6			3	3		1/13/2005	DRG				YES	AJP	3/5/2005
P-16_5	P-16_C6	421343.0571	3863296.1918	421343.0571	3863296.192	0.000	0.000	0.000	35.0	10.0	361	40	0	0	01/11/05		CD	Weld rods (60 pcs)	18 x 8	4	0	0			4	4		1/12/2005	DRG				YES	AJP	3/5/2005
P-16_57		421341.0792	3863305.7902						28.5	41.5	10	6	0.5	0.5	01/11/05		CD	Weld rod	5 x 0.187	0.25	0	3			6	6		1/13/2005	DRG				YES	AJP	3/5/2005
P-16_71		421344.5821	3863301.9805						40.0	29.0	8	6	0	0	01/11/05		CD	Tubing 3/8"	1 x 0.2	0.05	0	1			3	3		1/12/2005	DRG				YES	AJP	3/5/2005
P-16_72		421336.3606	3863321.4831						13.0	93.0	7	12	0	0	01/11/05		GEO	Rock	5 x 4	2	5	0			4	5		1/13/2005	DRG				YES	AJP	3/5/2005
P-16_9	P-16_C11	421348.0866	3863303.9600	421348.0866	3863303.96	0.000	0.000	0.203	51.5	35.5	142	155	0	0	01/11/05	Sprinkler head	CD	Sprinkler head	4 x 4		8	0			0	0		1/13/2005	DRG				YES	AJP	3/5/2005
P-21_1	P-21_C1	421498.2100	3863304.2414	421498.2287	3863304.058	0.184	0.340	0.311	44.2	36.5	262	200	1	0	01/09/05		CD	Rebar	0.375 x 24	2	0	-12			0	12		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_12		421505.1794	3863293.3833						67.1	0.9	15	19			01/09/05		GEO	Geo dirt/rock							0	18		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_13		421499.2113	3863304.2284						47.5	36.5	14	135	0	0	01/09/05		CD	Nails (4)	6	0.25	6	6			0	0		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_15		421501.7360	3863303.2211						55.8	33.2	7	34	0	0.5	01/09/05		CD	Nail (1)	6	0.25	10	-10			0	2		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_19		421505.3052	3863306.3604						67.5	43.5	7	7	1.5	0.5	01/09/05		MD	MK II frag	2	0.5	0	-18			0	0		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_2	P-21_C3	421502.6961	3863293.8014	421502.6412	3863293.848	0.072	0.549	0.570	58.9	2.3	43	75	1.5	-0.5	01/09/05		CD	Survey pin	8	0.25	0	-2			0	4		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_20		421501.4025	3863304.9515						54.7	38.9	7	12	1.5	-0.5	01/09/05		CD	Wire	4	0.05	6	0			0	0		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_3		421500.4008	3863302.5719						51.4	31.1	42	45	1	-1.5	01/09/05		CD	Wire	10	0.25	0	10			0	0		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_32		421505.6099	3863305.2935						68.5	40.0	4	13	0	0.5	01/09/05		CD	Steel cap	2	0.25	6	-6			1	1		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_33		421505.3052	3863297.5212						67.5	14.5	4	3	0	0	01/09/05		GEO	Rock	4 x 6	3	4	4			0	1		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_4	P-21_C5	421496.1650	3863302.1544	421496.1644	3863302.096	0.059	0.765	0.929	37.5	29.7	37	50	2.5	0	01/09/05		CD	Survey pin	8	0.25	6	6			0	4		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_44		421499.8207	3863295.3890						49.5	7.5	3	4	0	0	01/09/05		CD	Nail	1	0.01	-2	0			0	0		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_5	P-21_C2	421509.9994	3863304.1177	421509.6751	3863304.133	0.325	0.325	0.548	82.9	36.1	37	67	0	0	01/09/05		CD	Wire	18	1	0	18			0	0		1/12/2005	HEL	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_63		421503.9341	3863300.1124						63.0	23.0	3	3	1	0	01/09/05		CD	Nail/wire	6	0.05	8	-8			0	0		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-21_8		421504.3911	3863303.1602						64.5	33.0	20	15	1	-1	01/09/05		CD	Horse shoe (1/2)	6	0.5	-3	0			0	0		1/12/2005	DRG	Yes	HEL	01/2005	YES	AJP	3/5/2005
P-22_1	P-22_C3	421520.6930	3863295.8307	421520.6255	3863295.822	0.068	0.068	0.304	18.0	9.0	71	125	0	0	01/09/05		CD	Wire	10	1	0	-12			6	6		1/11/2005	HEL	Yes	HEL	01/2005			
P-22_2	P-22_C4	421520.6928	3863294.8556	421520.6928	3863294.856	0.000	0.305	0.610	18.0	5.8	70	115	0	1	01/09/05		CD	Nails	4	1	0	12			6	6		1/11/2005	HEL	Yes	HEL	01/2005			
P-22_3	P-22_C1	421520.6936	3863297.9727	421520.6936	3863297.973	0.000	0.000	0.305	18.0	16.0	41	97	0	0	01/09/05		CD	Hinge	2 x 6	1	-12	0			4	6		1/11/2005	HEL	Yes	HEL	01/2005			
P-22_5	P-22_C5	421519.0930	3863294.4691	421519.0316	3863294.109	0.366	0.366	0.217	12.8	4.5	36	5.5	0	0	01/09/05		CD	Nail	6	0.1	0	-6			2	3		1/11/2005	HEL	Yes	HEL	01/2005			
P-22_6		421518.4076	3863295.2310						10.5	7.0	33	2	-1.5	2	01/09/05		GEO	Rocks	5 x 5	5	10	0			3	3		1/11/2005	HEL	Yes	HEL	01/2005			
P-22_7		421517.9522	3863301.1728						9.0	26.5	7	12	0.5	-0.5	01/09/05		CD	Wire/rocks	3 x 3	2	8	0			0	3		1/11/2005	HEL	Yes	HEL	01/2005			
P-22_8		421518.6380	3863302.0105						11.3	29.3	4	5	0	-0.5	01/09/05		GEO	Rock	4 x 4	5	12	0			3	5		1/11/2005	HEL	Yes	HEL	01/2005			
P-22_9		421517.4948	3863299.8018						7.5	22.0	3	0.5	0.5	-1.5	01/09/05		CD	Wire	10	0.5	6	0			2	2		1/11/2005	HEL	Yes	HEL	01/2005			
R-11_1	R-11_C3	421202.1491	3863342.5430	421201.9968	3863342.695	0.215	0.152	0.152	72.5	62.0	31	70	-0.5	0	01/12/05	Survey nail	CD	Survey nail										1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP	3/5/2005
R-11_11							0.000	0.000				18	0	0	01/12/05		QC	QC Nail		0.25						1		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP	3/5/2005
R-11_14		421185.9979	3863333.4065						19.5	32.0	13	12	0	0	01/12/05	Mulch pile	GEO	Rock, very small in dirt - mulch pile								2		1/13/2005	RLF				YES	AJP	3/5/2005
R-11_16	R-11_C6	421186.9118	3863332.4922	421186.9118	3863332.645	0.152	0.152	0.152	22.5	29.0	12	4	0	0	01/12/05	Mulch pile	CD	Wire - mulch pile	2	0.25						1		1/13/2005	RLF				YES	AJP	3/5/2005
R-11_17		421203.8214	3863329.2885						78.0	18.5	8	12	-1	-0.5	01/12/05		CD	Nail	5	0.25						3		1/13/2005	RLF				YES	AJP	3/5/2005
R-11_19		421187.3679	3863329.1405						24.0	18.0	11	22	-1	-1.5	01/12/05		CD	Metal	2 x 5	0.5						4		1/13/2005	RLF				YES	AJP	3/5/2005

Dig Results for 15 January 2005 SOW Analysis

anomaly id	associate	interpreted easting	interpreted northing	associate interpreted easting	associate interpreted northing	distance from sum to associate, m	distance from sum to reacquired, m	distance from sum to investigation, m	interpreted local easting, ft	interpreted local northing, ft	interpreted max amplitude, mV	reacquired max amplitude, mV	reacquisition offset x, ft	reacquisition offset y, ft	reacquisition date	reacquisition comments	anomaly type	description	dimension, in	weight, lbs	dig offset x, in	dig offset y, in	Orient of nose	Inclin of nose	depth to top, in	depth to center of mass, in	photo	dig date	dig team initials	pass dig qc	dig qc initials	dig qc date	post dig geo agree	post dig geo initials	post dig geo date
R-11_25	R-11_C16	421184.1696	3863332.7976	421184.1697	3863332.95	0.152	0.216	0.216	13.5	30.0	7	9	-0.5	1	01/12/05		CD	Wire	7	0.25						2		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP	3/5/2005
R-11_29		421199.2525	3863335.0788						63.0	37.5	7	3	0	0.5	01/12/05		GEO	Rock, very small								2		1/13/2005	RLF				YES	AJP	3/5/2005
R-11_41		421205.9571	3863339.7998						85.0	53.0	5	8	1	1	01/12/05		CD	3/8 x 2 bolt		0.25	13	13				2		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP	3/5/2005
R-11_8		421206.8678	3863327.3072						88.0	12.0	15	15	-1	0.25	01/12/05		CD	Horseshoe	0.25	0.5						8		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP	3/5/2005
R-12_10	R-12_C7	421240.6905	3863334.1539	421240.6905	3863334.154	0.000	0.305	0.449	99.0	34.5	48	99	0	1	01/05/05		CD	Wire	8	0.25	-17	-17				2		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP	3/5/2005
R-12_11	R-12_C9	421226.2179	3863335.2241	421226.0656	3863335.224	0.152	0.152	0.152	51.5	38.0	28	56	-1	0	01/05/05		CD	Rod	0.25 x 18	0.25	0	0						1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP	3/5/2005
R-12_12	R-12_C11	421225.1514	3863335.0720	421225.1514	3863334.92	0.152	0.152	0.341	48.0	37.5	27	40	0	0	01/05/05		CD	Can	3 x 2.5	0.25	12	0						1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP	3/5/2005
R-12_13	R-12_C12	421227.5888	3863334.4620	421227.4366	3863334.919	0.482	0.466	0.466	56.0	35.5	25	40	-0.8	0	01/05/05		CD	Strap	1 x 12 x 0.125	0.25						9		1/13/2005	RLF	Yes	HEL	1/19/2005			
R-12_14		421234.2892	3863323.7961						78.0	0.5	19	33	0.5	-0.5	01/05/05		CD	Metal screw		0.25						1		1/13/2005	RLF				YES	AJP	3/5/2005
R-12_16		421240.6888	3863327.6031						99.0	13.0	13	24	0.5	0.5	01/05/05		CD	Very small			0	-24				4		1/13/2005	RLF	Yes	HEL	1/19/2005			
R-12_20		421233.8347	3863333.2416						76.5	31.5	13	15	0	0.5			CD	Very small			0	-12				1		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP	3/5/2005
R-12_21		421240.3870	3863338.5720						98.0	49.0	12	8	0	1	01/05/05		CD	Very small			0	-24				4		1/13/2005	RLF				YES	AJP	3/5/2005
R-12_23		421235.0528	3863330.6514						80.5	23.0	9	9	-2.8	0	01/05/05		CD	Very small			-3	0				1		1/13/2005	RLF				YES	AJP	3/5/2005
R-12_27		421240.5388	3863336.4391						98.5	42.0	9	4	-1.5	0	01/05/05		CD	Very small								5		1/13/2005	RLF				YES	AJP	3/5/2005
R-12_28		421239.9279	3863330.9548						96.5	24.0	8	21	0.5	0	01/05/05		NC											1/13/2005	RLF	Yes	HEL	1/19/2005			
R-12_29		421237.7962	3863335.2211						89.5	38.0	9	17	0	0	01/05/05		CD	Very small			0	-30				4		1/13/2005	RLF				YES	AJP	3/5/2005
R-12_32		421227.8943	3863337.5088						57.0	45.5	5	15	0	0	01/05/05		CD	Very small			-8	8				1		1/13/2005	RLF				YES	AJP	3/5/2005
R-12_39		421229.2678	3863346.1921						61.5	74.0	9	15	-1	0	01/05/05		CD	Bolt	0.375 x 1.5	0.25	0	24				1		1/13/2005	RLF				YES	AJP	3/5/2005
R-12_40		421240.8462	3863346.4938						99.5	75.0	8	11	0	0	01/05/05		CD	Very small								4		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP	3/5/2005
R-12_41		421237.7954	3863332.1742						89.5	28.0	6	20	1	1	01/05/05		GEO	Hot dirt			-8	-8				6		1/13/2005	RLF				YES	AJP	3/5/2005
R-12_46		421232.0065	3863333.0897						70.5	31.0	8	8	0	0	01/05/05		CD	Wire	2	0.25	0	12				1		1/13/2005	RLF				YES	AJP	3/5/2005
R-12_53		421229.7254	3863348.3248						63.0	81.0	6	7	0	0	01/05/05		CD	Very small								2		1/13/2005	RLF				YES	AJP	3/5/2005
R-12_54		421225.1522	3863337.9666						48.0	47.0	7	10	1.1	1.1	01/05/05		CD	Very small			8	-8				1		1/13/2005	RLF				YES	AJP	3/5/2005
R-12_55		421229.7199	3863327.7583						63.0	13.5	6	10	0	0	01/05/05		MD	Pull ring		0.25	0	6				3		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	AJP	3/5/2005
R-13_100		421258.3679	3863353.4970						57.0	98.0	15	14	-0.2	-1	01/06/05		CD	1" banding - Also 166	12 x 1	0.25					3	5		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	DRA	3/5/2005
R-13_115		421255.7773	3863350.6031						48.5	88.5	13	12	-0.5	1	01/06/05		MD	Frag	0.25 x 0.5	0.25	25	-25			2	2		1/13/2005	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_14	R-13_C16	421268.4224	3863351.9709	421268.4224	3863351.971	0.000	0.216	0.482	90.0	93.0	44	44	-0.5	-0.5	01/06/05		CD	Nail	10	0.25	-12	0			1	2		1/13/2005	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_148		421259.7380	3863349.6880						61.5	85.5	10		-0.5	-1	01/06/05		CD	Wire	10	0.25						3		1/13/2005	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_161		421257.4522	3863347.4034						54.0	78.0	8	7.7	1	-0.5	01/06/05		GEO	Rock	0.5 x 0.5		0	-30				3		1/13/2005	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_42	R-13_C25	421271.4667	3863342.2197	421271.1619	3863342.067	0.341	0.152	0.457	100.0	61.0	16	15	-0.5	-0.5	01/06/05		CD	Bar	1 x 6 x 0.25	0.5	-24	0			2	3		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	DRA	3/5/2005
R-13_51		421262.6333	3863352.1248						71.0	93.5	17	13	0.5	0.7	01/06/05		GEO	Hot dirt			30	0			4	8		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	DRA	3/5/2005
R-13_67		421264.7665	3863353.3430						78.0	97.5	17	17	0	-1.3	01/06/05		GEO	Hot dirt							4	8		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	DRA	3/5/2005
R-13_75		421269.4858	3863341.0014						93.5	57.0	13	13	-1	0	01/06/05		CD	Handle	6	0.25	0	6			2	2		1/13/2005	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_76		421253.1873	3863350.2991						40.0	87.5	16		0	0	01/05/05		CD	Wire	0.125 x 12	0.25	0	6			2	3		1/13/2005	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-13_80		421254.7106	3863349.5370						45.0	85.0	13	13	0	0	01/06/05		CD	Very small			30	0				3		1/13/2005	RLF	Yes	HEL	1/19/2005	YES	DRA	3/5/2005
R-13_96		421253.3371	3863341.0059						40.5	57.0	14	10	-0.5	1	01/06/05		CD	Nail	5	0.25	0	12			1	3		1/13/2005	RLF	Yes	HEL	01/2005	YES	DRA	3/5/2005
R-15_C45	R-15_88	421304.2205	3863339.9253	421304.5252	3863340.078	0.341	0.341	0.341	7.5	53.5	2	16	0	0	01/19/05		CD	Nail										1/14/2005	RLF				YES	DRA	2/5/2005
R-19_11	R-19_C11	421443.3151	3863348.5718	421443.4674	3863348.572	0.152	0.152	0.457	64.0	82.0	33	53	0	0	01/08/05		CD	Wire	18	0.25	-12	0				0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_12	R-19_C14	421442.3085	3863348.2725	421442.484	3863348.343	0.189	0.189	0.189	60.7	81.0	31	21	0	0	01/08/05		GEO	Rock								1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_13	R-19_C9	421437.0684	3863352.8921	421437.0698	3863352.916	0.024	0.024	0.024	43.5	96.2	30	40	0	0	01/08/05		GEO	Rock								2		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_14		421445.0908	3863349.7758						69.8	86.0	24		0.5	-0.5	01/08/05		CD	Wire	12	0.25						1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_15	R-19_C12	421444.5333	3863346.5909	421444.3964	3863346.719	0.187	0.187	0.312	68.0	75.5	27	32	0	0	01/08/05		GEO	Rock			0	-6				2		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_17	R-19_C24	421446.3832	3863343.4678	421446.6654	3863343.543	0.292	0.292	0.292	74.1	65.3	16	30	0	0	01/08/05		GEO	Rock								1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_20		421453.5206	3863342.3226						97.5	61.5	15	19	1.5	0	01/08/05		CD	Horseshoe	0.5	0.5						1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_24	R-19_C40	421452.1524	3863353.1396	421452.1524	3863352.987	0.152	0.341	0.305	93.0	97.0	14	14	1	0	01/08/05		CD	Nail	6	0.25	0	-6				1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_25		421446.8730	3863346.5934						75.7	75.5	14	20	0	0	01/08/05		GEO	Rock								0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_26	R-19_C39	421450.5753	3863354.0062	421450.3244	3863353.75	0.359	0.615	0.615	87.8	99.8	12	34	0	1	01/08/05		CD	Pliers								1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_27	R-19_C21	421445.1594	3863346.3832	421445.2668	3863346.486	0.149	0.112	0.112	70.1	74.8	13	20	0.5	0	01/08/05		GEO	Rock								0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_28		421439.3536	3863346.8209						51.0	76.3	13	25	0	0	01/08/05		GEO	Rock								2		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_30	R-19_C25	421445.8497	3863352.6100	421445.7537	3863352.532	0.124	0.710	0.710	72.3	95.3	13	13	2	0	01/08/05		CD	Wire		0.25						0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_30		421445.8497	3863352.6100	421445.2968	3863353.142	0.767	1.278	1.278	72.3	95.3	13	13	2	0	01/08/05		CD	Wire		0.25						0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_31	R-19_C15	421447.5795	3863343.8478	421447.5795	3863343.695	0.152	0.152	0.000	78.0	66.5	14	24	0	0	01/08/05		CD	Nail	1.5	0.25	0	-6				3		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_32		421436.9179	3863353.7534						43.0	99.0	10	26	1	0	01/08/05		CD	Wire	1	0.25						1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_33	R-19_C17	421448.6457	3863342.7811	421448.7635	3863342.793	0.118	0.118	0.118	81.5	63.0	12	26	0	0	01/08/05		GEO	Rock								1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_36	R-19_C22	421437.4136	3863349.6974	421437.5262	3863349.792	0.147	0.147	0.147	44.6	85.7	9	15	0	0	01/08/05		GEO	Rock								1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_39	R-19_C37	421447.5800	3863345.8283	421447.58	3863345.828	0.000	0.000	0.610	78.0	73.0	10	20	0	0	01/08/05		GEO	Large rock			17	-17				8		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_4	R-19_C8	421449.7118	3863341.7143	421449.7118	3863341.714	0.000	0.152	0.152	85.0	59.5	74	75	0	-0.5	01/08/05		CD	Wire	18	0.25						1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_40	R-19_C19	421451.2243	3863340.4567	421451.2349	3863340.495	0.040	0.343	0.343	90.0	55.4	7	3	0	-1	01/08/05		GEO	Rock								0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_41	R-19_C20	421446.9703	3863344.3050	421447.1226	3863344.153	0.215	0.681	0.681	76.0	68.0	10	22	-1.5	0.5	01/08/05		GEO	Rock								1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_45		421438.4792	3863352.5456						48.1	95.0	8	25	0.5	0	01/08/05		GEO	Rock								2		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_46	R-19_C41	421442.5528	3863346.4391	421442.5528	3863346.439	0.000	0.000	0.000	61.5	75.0	7	16	0	0	01/08/05		GEO	Rock								2		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_47	R-19_C32	421443.2795	3863345.7698	421443.3144	3863345.982	0.215	0.215	0.215	63.9	72.8	8	22	0	0	01/08/05		GEO	Rock								1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_48		421453.7164	3863353.9785						98.1	99.8	6	5	0	0	01/08/05		CD	Screw driver		1	0	12				0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-19_6		421438.3713	3863347.2081						47.8	77.5	47	50	0	0	01/08/05		CD	Nails		0.25						1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_1	R-20_C1	421478.0594	3863352.2249	421478.0736	3863352.376	0.151	0.151	0.155	78.0	94.0	1428	3	0	0	01/08/05	Barb wire around tree	CD	Wire rust flakes	3	0.25	0	12			0			1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_11	R-20_C11	421466.7013	3863345.4590	421466.6276	3863345.369	0.116	0.394	0.394	40.7	71.8	29	34	-1.5	0	01/08/05		CD	Wire								4		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_14	R-20_C9	421463.5799	3863346.7404	421463.5263	3863346.81	0.088	0.217	0.217	30.5	76.0	29	27	0.5	0	01/08/05		GEO	Rock										1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_15	R-20_C23	421466.6270	3863343.2365	421466.6269	3863342.932	0.305	0.152	0.152	40.5	64.5	25	55	0	-0.5	01/08/05		GEO	Rock								0		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_16		421465.8639	3863339.2755	421466.6259	3863339.123	0.777	0.777	0.980	38.0	51.5	20	13	0	0	01/08/05		GEO	Rock			-8	-8				0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_17	R-20_C13	421465.5609	3863345.9787	421465.6243	3863345.928	0.081	0.081	0.081	37.0	73.5	26	31	0	0	01/08/05		GEO	Rock										1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_18	R-20_C31	421467.2570	3863338.5284	421467.5402	3863338.666	0.315	0.467	0.467	42.6	49.0	22	33	-0.5	1	01/08/05		CD	Wire	6							0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_20	R-20_C10	421464.7992	3863346.8928	421464.7991	3863346.588	0.305	0.305	0.305	34.5	76.5	21	25	0	0	01/08/05		CD	6' wire	6	0.25					0			1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_21	R-20_C22	421462.0526	3863334.4005	421462.0526	3863334.401	0.000	0.000	0.000	25.5	35.5	20	11	0	0	01/08/05		CD	Rock/wire	12							0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_22	R-20_C17	421464.4949	3863348.8733	421464.3425	3863349.026	0.215	0.215	0.215	33.5	83.0	18	25	0	0	01/08/05		CD	Wire	19	0.25						2		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_23		421458.0434	3863338.4468						12.3	48.8	16	21	0	0	01/08/05		GEO	Rock								0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_24		421467.5427	3863348.1115						43.5	80.5	17	17	0.5	-0.5	01/08/05		GEO	Rock			9	0				6		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_25	R-20_C16	421459.3124	3863345.6740	421459.3124	3863345.522	0.152	0.152	0.152	16.5	72.5	18	16	0	0	01/08/05		CD	Wire/rock	24							1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_25		421459.3124	3863345.6740	421458.8554	3863346.283	0.762	0.762	0.762	16.5	72.5	18	16	0	0	01/08/05		CD	Wire/rock	24							1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_26		421463.8833	3863341.4084						31.5	58.5	13	3	1.5	0	01/08/05		GEO	Rock								0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_27	R-20_C20	421464.1903	3863349.6350	421464.3428	3863349.787	0.216	0.216	0.216	32.5	85.5	15	20	0	0	01/08/05		CD	Wire - Part of 22										1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_29	R-20_C28	421459.1738	3863340.5784	421459.18	3863340.504	0.075	0.177	0.177	16.0	55.8	15	16	-0.5	-0.5	01/08/05		CD	Wire	12							0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_4	R-20_C21	421471.6340	3863349.3255	421471.5834	3863349.46	0.143	0.143	0.054	56.9	84.5	53	42	0	0	01/08/05		CD	Nails / 3' wire	36	0.25	0	6				3		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_40		421460.5316	3863345.5217						20.5	72.0	10	5	0	0	01/08/05		GEO	Rock								1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_41	R-20_C29	421467.3889	3863343.0842	421467.5414	3863343.084	0.152	0.152	0.152	43.0	64.0	9	41	0	0	01/08/05		GEO	Rock								7		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_42		421469.3717	3863348.8733						49.5	83.0	9	8	0.7	1	01/08/05		GEO	Rock			-12	0				2		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_43		421467.3899	3863346.5881						43.0	75.5	9	11	0	0	01/08/05		GEO	Rock								3		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_45		421457.1807	3863352.6819						9.5	95.5	7	6	-0.5	-2	01/08/05		GEO	Rock								1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_46		421464.1883	3863342.1701						32.5	61.0	7	17	0	-1	01/08/05		GEO	Rock								0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_47		421473.6384	3863346.8928						63.5	76.5	9	10	0.5	-0.5	01/08/05		GEO	Rock (2ea)			6	0				4		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_48		421463.6141	3863342.8075						30.6	63.1	8	13	0	0	01/08/05		CD	Nail	2							2		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_49	R-20_C33	421458.8269	3863352.0760	421459.3142	3863352.073	0.487	0.487	0.573	14.9	93.5	9	4	0	0	01/08/05		GEO	Rock			0	-12				0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_6	R-20_C4	421457.1797	3863349.0256	421457.0273	3863349.026	0.152	0.152	0.152	9.5	83.5	57	105	0	0	01/08/05		CD	Wire/rock	36							2		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_60		421470.1324	3863343.9982						52.0	67.0	6	3	0.5	0.5	01/08/05		GEO	Rock								2		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_62		421470.2984	3863348.2110						52.5	80.8	6	10	0	0	01/08/05		GEO	Rock								3		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_63		421470.1333	3863347.1975						52.0	77.5	7	10	1	0	01/08/05		GEO	Rock								3		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_64		421454.3208	3863342.5509						0.1	62.2	6	4	0.4	-0.75	01/08/05		GEO	Rock								0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_65		421462.0573	3863351.7678						25.5	92.5	6	10	0	0	01/08/05		CD	Nail	3		0	-6				2		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_67		421466.3233	3863347.5022						39.5	78.5	6	4	0	0	01/08/05		MD	Found out of hole	0.5 x 0.25 x 0.5	0.25						2		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_68	R-20_C39	421472.9068	3863345.8769	421473.0284	3863345.674	0.237	0.400	0.489	61.1	73.2	7	10	1	0.5	01/08/05		GEO	Rock			6	0						1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_69		421469.5226	3863343.3889						50.0	65.0	6	3	0	0	01/08/05		GEO	Rock								2		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_7	R-20_C6	421464.7985	3863344.4553	421464.9562	3863344.26	0.251	0.251	0.195	34.5	68.5	46	121	0	0	01/08/05		CD	Nail/rock	1.5		6	0				2		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_70		421475.0101	3863347.3498						68.0	78.0	6	7	0	1	01/08/05		CD	Rock - electric live wire								1		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_71		421470.1315	3863340.7990						52.0	56.5	6	9	-2.3	0	01/08/05		GEO	Rock								6		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_73		421461.4461	3863345.8264						23.5	73.0	5	5	-0.5	-0.5	01/08/05		CD	Wire/nail	3							0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_74		421460.2257	3863341.5607						19.5	59.0	5	11	0	-1	01/08/05		CD	Wire	2							0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_75		421456.2261	3863353.9816						6.4	99.8	5	7	0.5	0	01/08/05		GEO	Rock			9	0						1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_76		421454.3122	3863346.2253						0.1	74.3	4	3	0.3	-2.5	01/08/05		GEO	Rock								0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_77		421463.2755	3863348.2639						29.5	81.0	5	3	1.5	-0.5	01/08/05		GEO	Rock			-6	0			0			1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_78	R-20_C42	421468.4558	3863343.0842	421468.4557	3863342.932	0.152	0.457	0.610	46.5	64.0	5	7	0	-2	01/08/05		GEO	Rock			0	-6				8		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005

Dig Results for 15 January 2005 SOW Analysis

anomaly id	associate	interpreted easting	interpreted northing	associate interpreted easting	associate interpreted northing	distance from sum to associate, m	distance from sum to reacquired, m	distance from sum to investigation, m	interpreted local easting, ft	interpreted local northing, ft	interpreted max amplitude, mV	reacquired max amplitude, mV	reacquisition offset x, ft	reacquisition offset y, ft	reacquisition date	reacquisition comments	anomaly type	description	dimension, in		weight, lbs	dig offset x, in	dig offset y, in	Orient of nose	Inclin of nose	depth to top, in	depth to center of mass, in	photo	dig date	dig team initials	pass dig qc	dig qc initials	dig qc date	post dig geo agree	post dig geo initials	post dig geo date
R-20_8	R-20_C32	421458.7912	3863338.2559	421458.914	3863338.231	0.125	0.125	0.125	14.8	48.2	33	21	0	0	01/08/05		CD	18" wire/rock									0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_81		421466.0201	3863353.2913						38.5	97.5	5	5	0.5	1	01/08/05		CD	Wire				0	30				2		1/10/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_82		421462.8174	3863344.7599						28.0	69.5	5	3	0.5	0	01/08/05		GEO	Rock									0		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
R-20_9		421458.1271	3863347.5884	421458.3984	3863347.045	0.607	0.607	0.607	12.6	78.8	35	50	0	0	01/08/05		CD	Wire/rock		12							1		1/11/2005	RLF	Yes	HEL	01/2005	YES	AJP	3/5/2005
S-16_126		421336.0503	3863364.0220						11.9	32.6	4	15	0	0	01/12/05		GEO	Geo soil								0	1		1/13/2005	DRG				YES	AJP	3/5/2005
S-16_18	S-16_C10	421342.5000	3863354.5000	421342.4634	3863354.388	0.118	0.123	0.123	33.1	1.4	15	46	-0.5	-0.5	01/13/05		CD	#5 wood w/screws	3 x 3		0.25					3	4		1/13/2005	DRG				YES	AJP	3/5/2005
S-16_2	S-16_C5	421352.0000	3863363.0000	421352.0635	3863362.917	0.105	0.105	0.136	64.3	29.3	80	33	0	0	01/13/05		CD	Mechanical part	4 x 2		2.5	0	-8			2.5	3		1/13/2005	DRG				YES	AJP	3/5/2005
S-16_21	S-16_C3	421338.6000	3863354.1000	421338.807	3863354.084	0.208	0.208	0.158	20.3	0.1	21	41	0	0	01/13/05		CD	Aluminum can pieces		2.5	0.25	4	4			3	4		1/13/2005	DRG				YES	AJP	3/5/2005
S-16_22	S-16_C20	421351.7500	3863358.7500	421351.6053	3863358.651	0.175	0.486	0.344	63.5	15.3	15	22	0	1.2	01/13/05		CD	Chain		10		1	0	-6			4	4		1/13/2005	DRG				YES	AJP	3/5/2005
S-16_26	S-16_C8	421356.7500	3863363.5000	421356.634	3863363.373	0.172	0.190	0.190	79.9	30.9	16	20	-1	-0.5	01/13/05		GEO	Geo soil											1/13/2005	DRG				YES	AJP	3/5/2005
S-16_3	S-16_C9	421359.7500	3863355.0000	421359.8311	3863355.145	0.166	0.166	0.092	89.7	3.0	34	43	0	0	01/13/05		MD	MK II practice - no fuze (fired)	3.5 x 2.25		2.5	0	4	W	15	3	4		1/13/2005	DRG				YES	AJP	3/5/2005
S-16_45		421334.2500	3863358.5000						6.0	14.5	8	9	0	0	01/12/05		GEO	Geo soil											1/13/2005	DRG				YES	AJP	3/5/2005
S-16_53		421341.5000	3863360.7500						29.8	21.9	7	5	-1	0.5	01/12/05		GEO	Geo rock	1 x 1		0.25	4	4			2	2.5		1/13/2005	DRG				YES	AJP	3/5/2005
S-16_57		421361.7216	3863359.3354						96.2	17.3	6	12	-0.5	-1	01/12/05		CD	Nail		4	0.25	-8	-8			1	3		1/13/2005	DRG				YES	AJP	3/5/2005
S-16_6	S-16_C16	421350.6905	3863355.9520	421350.5381	3863355.757	0.247	0.158	0.300	60.0	6.1	26	40	-1	-0.5	01/13/05		MD	MK II fuze/frag	1 x 1		0.25	-4	4	0	0	6	6.5		1/13/2005	DRG				YES	AJP	3/5/2005
S-16_7	S-16_C11	421337.4376	3863365.3096	421337.4388	3863365.206	0.103	0.201	0.049	16.5	36.8	29	56	0	-1	01/13/05		MD	MK II practice - with fuze (fired)	4.5 x 2.25		2.5	0	6	S	45	5	6		1/13/2005	DRG				YES	AJP	3/5/2005
S-16_70		421335.7500	3863365.7500						11.0	38.3	5	12	-1.5	-0.5	01/12/05		GEO	Geo soil								0	5		1/13/2005	DRG				YES	AJP	3/5/2005
S-16_71		421345.2500	3863358.5000						42.1	14.5	6	3	0	0	01/12/05		GEO	Geo soil	1 x 2		0.25					2	3		1/13/2005	DRG				YES	AJP	3/5/2005
S-16_83		421341.5722	3863371.7277						30.1	57.9	5	5	-0.5	-0.5	01/12/05		CD	2 nails		2	0.25	0	3			1	1		1/13/2005	DRG				YES	AJP	3/5/2005
S-16_91		421357.0000	3863355.5000						80.7	4.7	5	12	0.5	-0.5	01/12/05		CD	Weld rod	3 x 0.125		0.25	6	0			1	2.5		1/13/2005	DRG				YES	AJP	3/5/2005
S-18_1	S-18_C1	421413.7151	3863365.8457	421413.6115	3863365.791	0.117	0.117	0.117	66.8	38.7	207	475	0	0	01/08/05		CD	1/2" pipe		30	2					0			1/12/2005	RLF				YES	AJP	3/5/2005
S-18_11		421420.3167	3863370.6685						88.5	54.5	18	22	0	0	01/08/05		CD	Clevis pin		2	0.25					0			1/12/2005	RLF				YES	AJP	3/5/2005
S-18_15		421422.1408	3863355.7380						94.5	5.5	8						CD	Survey Nail		9	0.5						1		1/12/2005	RLF						
S-18_16	S-18_C14	421393.3552	3863384.3867	421393.3552	3863384.539	0.152	0.152	0.152	0.0	99.5	8	4	0	0	01/08/05		NC	Non-ferrous											1/12/2005	RLF				YES	AJP	3/5/2005
S-18_16	T-18_C10	421393.3552	3863384.3867	421393.3552	3863384.539	0.152	0.152	0.152	0.0	99.5	8	4	0	0	01/08/05		NC	Non-ferrous											1/12/2005	RLF				YES	AJP	3/5/2005
S-18_19		421407.4970	3863360.0398						46.4	19.6	6	10	0	0	01/08/05		GEO	Hot dirt								8			1/12/2005	RLF				YES	AJP	3/5/2005
S-18_2	S-18_C3	421420.7171	3863374.8664	421420.8096	3863374.535	0.344	0.639	0.639	89.8	68.3	186	390	0.5	1	01/08/05		NC	Non-ferrous											1/12/2005	RLF				YES	AJP	3/5/2005
S-18_20		421416.6623	3863377.6774						76.5	77.5	5	3	0	0	01/08/05		GEO	Hot dirt				-6	0			6			1/12/2005	RLF				YES	AJP	3/5/2005
S-18_4	S-18_C5	421423.1140	3863374.0314	421423.0598	3863374.019	0.056	0.778	0.778	97.7	65.5	84	88	0.5	-2.5	01/08/05		NC	Non-ferrous											1/12/2005	RLF				YES	AJP	3/5/2005
S-18_6	S-18_C6	421419.4739	3863376.0570	421419.47	3863376.03	0.028	0.028	0.277	85.7	72.2	41	55	0	0	01/08/05		CD	1/2" pipe		6	0.5	0	-12			0			1/12/2005	RLF				YES	AJP	3/5/2005
S-18_7	S-18_C8	421409.8047	3863370.2143	421409.8047	3863370.214	0.000	0.000	0.000	54.0	53.0	34	50	0	0	01/08/05		CD	Nail, survey		5	0.25					2			1/12/2005	RLF				YES	AJP	3/5/2005
S-18_8	S-18_C9	421423.5137	3863362.1364	421423.5136	3863361.984	0.152	0.550	0.550	99.0	26.5	27	24	1.5	0.5	01/08/05		GEO	Rock	7 x 9							1			1/12/2005	RLF				YES	AJP	3/5/2005
S-18_9		421417.1990	3863366.8766	421417.1164	3863366.861	0.084	0.084	0.084	78.3	42.1	40				01/08/05	Soda can	NC	Non-ferrous											1/12/2005	RLF				YES	AJP	3/5/2005
S-19_106	S-19_C95	421427.0215	3863378.8942	421427.0215	3863378.894	0.000	0.482	0.482	10.5	81.5	10	4	-1.5	0.5	01/09/05		CD	Small wire								0			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_110	S-19_C27	421427.4775	3863374.9331	421427.4775	3863374.933	0.000	0.000	0.000	12.0	68.5	13	32	0	0		Can	CD	Beer can								0			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_12	S-19_C8	421438.1846	3863370.9138	421438.2725	3863371.021	0.138	0.138	0.138	47.1	55.3	77	100	0	0	01/09/05		CD	Barb wire		13	0.25	0	0			1			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_12.1		421438.1846	3863370.9138						47.1	55.3	77	100	0	0	01/09/05		CD	Barb wire		13	0.25	0	0			1			1/11/2005	RLF						
S-19_120		421443.0128	3863363.3515						63.0	30.5	10	12	0	0	01/09/05		CD	Nail				0	-24			1			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_123	S-19_C70	421443.4697	3863362.5895	421443.4697	3863362.894	0.305	0.305	0.682	64.5	28.0	10	15	0	0	01/09/05		CD	Wire				-24	0			1			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_124		421436.6169	3863377.2182						42.0	76.0	7	4	0	0	01/09/05		CD	Nail		4						2			1/12/2005	RLF				YES	AJP	3/5/2005
S-19_125		421432.8094	3863379.1990						29.5	82.5	8	5	0	-0.5	01/09/05		CD	Wire brush wires - Shared with 143								1			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_13	S-19_C20	421442.4025	3863354.5136	421442.4427	3863354.675	0.166	0.381	0.381	61.0	1.5	97	102	-1	0	01/09/05		CD	Wire		144	0.25					0			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_130		421425.1914	3863369.9057						4.5	52.0	6	5	0.5	0	01/09/05		CD	1/4" cable		3		-2	-2			1			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_131		421449.4112	3863371.2746						84.0	56.5	9	3	0	0	01/09/05		NC												1/11/2005	RLF						
S-19_132		421435.2454	3863372.9520						37.5	62.0	6	6	0	0	01/09/05		NC												1/11/2005	RLF						
S-19_137		421426.5658	3863384.0741						9.0	98.5	5	3	0	0	01/09/05		CD	Nail		1.5						1			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_138		421445.7553	3863369.7511						72.0	51.5	6	6.5	0	0	01/09/05		CD	Wire		2						0			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_139		421451.7687	3863365.2888						91.7	36.9	6	4	1	-0.5	01/09/05		CD	Wire loop								2			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_140	S-19_C82	421447.5829	3863364.4174	421447.1259	3863364.265	0.482	0.482	0.482	78.0	34.0	8	10	0	0	01/09/05		CD	Small								1			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_141		421429.3034	3863366.2488						18.0	40.0	6	5.5	0	0	01/09/05		GEO	Hot dirt								6			1/12/2005	RLF				YES	AJP	3/5/2005
S-19_142		421452.6098	3863361.2162						94.5	23.5	6	12	0	-1	01/09/05		CD	Nail		3		0	18			2			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_143		421432.5045	3863377.8277						28.5	78.0	6	4	0	0	01/09/05		CD	Wire brush wires - Shared with 125								1			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_149		421430.8289	3863377.0659						23.0	75.5	5	3	-1	0.5	01/09/05		NC												1/11/2005	RLF						
S-19_2	S-19_C2	421453.5389	3863367.1371	421453.2374	3863367.03	0.320	0.320	0.320	97.5	42.9	628	550	0	0	01/09/05	Metal pipe	CD	1" rod pipe		36	1					0			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_2		421453.5389	3863367.1371	421453.9808	3863366.245	0.996	0.996	0.996	97.5	42.9	628	550	0	0	01/09/05	Metal pipe	CD	1" rod pipe		36	1					0			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_22	S-19_C22	421452.1527	3863356.9491	421452.1527	3863356.949	0.000	0.000	0.000	93.0	9.5	46	95	0	0	01/09/05		CD	Wire		8	0.25					2			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_28	S-19_C18	421441.0324	3863362.7423	421440.7277	3863362.59	0.341	0.341	0.341	56.5	28.5	42	50	0	0	01/09/05		CD	Nail, multiple			0.5					2			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_28		421441.0324	3863362.7423	421441.6417	3863362.285	0.762	0.762	0.762	56.5	28.5	42	50	0	0	01/09/05		CD	Nail, multiple			0.5					2			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_29	S-19_C102	421428.5756	3863370.5448	421428.8474	3863370.667	0.298	0.506	0.506	15.6	54.1	33	64	0	-1	01/09/05		CD	Wire		36	0.25					1			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_29	S-19_C90	421428.5756	3863370.5448	421428.3904	3863370.82	0.331	0.608	0.608	15.6	54.1	33	64	0	-1	01/09/05		CD	Wire		36	0.25					1			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_3	S-19_C3	421427.0162	3863357.1081	421427.0162	3863357.26	0.152	0.628	0.628	10.5	10.0	369	265	0.5	-1.5	01/09/05		CD	1/2" rod		36	1					1			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_30	S-19_C16	421433.6820	3863372.0183	421433.4494	3863371.81	0.312	0.563	0.563	32.4	58.9	45	45	0	1	01/09/05		CD	Horse shoe		0.25	0.25					2			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_31	S-19_C59	421448.1918	3863356.6454	421448.0394	3863356.798	0.216	0.216	0.216	80.0	8.5	31	31	0	0	01/09/05		CD	Nail		6						0			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_32	S-19_C33	421444.2533	3863364.6838	421444.4505	3863364.511	0.262	0.677	0.677	67.1	34.9	37	52	-1.5	0	01/09/05		CD	Nails								1			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_36	S-19_C32	421437.4989	3863357.4176	421437.5177	3863357.357	0.063	0.292	0.292	44.9	11.0	35	68	1	0	01/09/05		CD	Wire		24	0.25					0			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_40		421451.0862	3863354.5111						89.5	1.5	31	26	0.5	0	01/09/05		CD	Wire		12						0			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_44	S-19_C87	421432.3144	3863362.1386	421432.3004	3863362.209	0.072	0.072	0.072	27.9	26.5	23	22	0	0	01/09/05		CD	Nail		2						0			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_47	S-19_C44	421436.6161	3863371.8853	421436.6161	3863371.885	0.000	0.549	0.889	42.0	58.5	27	20	1.5	1	01/09/05		CD	Wire		18		0	18			1			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_49	S-19_C52	421440.4232	3863364.4186	421440.7279	3863364.419	0.000	0.305	0.305	54.5	34.0	22	37	0	0	01/09/05		CD	Wire		10						1			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_5	S-19_C30	421443.3167	3863355.8848	421443.5011	3863356.043	0.243	0.189	0.189	64.0	6.0	183	175	1	1	01/09/05		CD	Bracket	6 x 18		0.25					2			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_50	S-19_C13	421424.3536	3863379.9402	421424.3316	3863380.033	0.095	0.340	0.368	1.7	84.9	34	50	1	0	01/09/05		GEO	Rock	4 x 5			0	-3			4			1/12/2005	RLF				YES	AJP	3/5/2005
S-19_61	S-19_C73	421445.1459	3863369.1417	421445.2983	3863369.142	0.152	0.152	0.762	70.0	49.5	15	78	0	0	01/09/05		CD	Wire		8		-24	0			2			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_62	S-19_C49	421445.2002	3863364.8095	421445.2979	3863364.875	0.118	0.118	0.118	70.2	35.3	21	18	0	0	01/09/05		CD	Wire		14						2			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_92	S-19_C31	421427.9345	3863375.3901	421427.9346	3863375.543	0.152	0.341	0.341	13.5	70.0	16	32	0.5	-0.5	01/09/05	Beer can	CD	Wire		18						0			1/11/2005	RLF				YES	AJP	3/5/2005
S-19_95	S-19_C29	421425.1874	3863354.3663	421425.1875	3863354.671	0.305	0.305	1.219	4.5	1.0	31				01/09/05	No contact	GEO	Rock				0	-36			0			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_1		421459.3147	3863362.4350	421459.421	3863362.436	0.106	1.418	1.418	16.5	27.5	983	618	5	0	01/08/05		CD	1/2 conduit		48	0.5					0			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_10	S-20_C8	421457.3335	3863361.8254	421457.4859	3863361.673	0.216	0.216	0.216	10.0	25.5	63	128	1	0	01/08/05		CD	Wire		120	0.25					0			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_11	S-20_C33	421464.9535	3863357.1010	421464.8643	3863356.846	0.270	0.221	0.221	35.0	10.0	40	43	0	-1.5	01/08/05		CD	2 nails			0.25					1			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_12	S-20_C40	421460.9435	3863361.1273	421461.1382	3863361.122	0.195	0.381	0.381	21.8	23.2	39	35	-0.5	0.5	01/08/05		GEO	Rock								1			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_13	S-20_C29	421463.8867	3863358.0154	421463.8787	3863357.797	0.218	0.066	0.066	31.5	13.0	33	51	0	-0.5	01/08/05		CD	Nail		7	0.25					8			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_14	S-20_C25	421460.2945	3863365.6337	421460.2291	3863365.788	0.167	0.218	0.218	19.7	38.0	27	50	0.5	0.5	01/08/05		CD	Tin		8	0.25					0			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_15	S-20_C24	421460.8387	3863364.8734	421460.6863	3863365.026	0.216	0.000	0.457	21.5	35.5	29	45	-0.5	0.5	01/08/05		CD	Wire		12	0.25	0	18			0			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_18		421457.6383	3863366.2450						11.0	40.0	23	38	0.5	1	01/08/05		CD	Nail		5		0	0			0			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_18		421457.6383	3863366.2450						11.0	40.0	23	38	0.5	1	01/08/05		CD	Nail		5		0	0			0			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_20	S-20_C13	421462.2103	3863356.1866	421462.0579	3863356.187	0.152	0.152	0.152	26.0	7.0	25	32	0	0	01/08/05		CD	Wire		30	0.25					0			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_24		421457.4859	3863357.1010						10.5	10.0	16	42	0	0	01/08/05		CD	1/2 pin			0.25	-6	0			2			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_25	S-20_C17	421465.2583	3863360.4538	421465.2583	3863360.606	0.152	0.152	0.457	36.0	21.0	21	16	0	0	01/08/05		CD	Wire		8	0.25	0	-12			2			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_26		421456.2667	3863355.5770						6.5	5.0	13	13	0	0	01/08/05		CD	Nail		3	0.25	12	0			1			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_27	S-20_C36	421463.7343	3863355.4246	421463.5819	3863355.425	0.152	0.152	0.152	31.0	4.5	17	21	-0.5	-0.5	01/08/05		CD	Wire		12	0.25					1			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_29	S-20_C21	421458.2479	3863358.6250	421458.4003	3863358.473	0.216	0.216	0.520	13.0	15.0	15	21	0	0	01/08/05		CD	Wire			0.25	-8	8			2			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_3	S-20_C14	421467.8969	3863358.5823	421467.5443	3863358.777	0.403	0.401	0.351	44.7	14.9	107	150	-0.5	-0.5	01/08/05		CD	Flange	2 x 4		0.5	-6	0			0	1		1/11/2005	RLF				YES	AJP	3/5/2005
S-20_3		421467.8969	3863358.5823	421467.5443	3863358.015	0.668	0.460	0.417	44.7	14.9	107	150	-0.5	-0.5	01/08/05		CD	Flange	2 x 4		0.5	-6	0			0	1		1/11/2005	RLF				YES	AJP	3/5/2005
S-20_30	S-20_C34	421463.5819	3863359.9966	421463.8867	3863359.997	0.305	0.341	0.341	30.5	19.5	14	21	0.5	1	01/08/05		GEO	Rock								2			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_35		421457.1811	3863354.8150						9.5	2.5	8	10	1	0	01/08/05		GEO	Rock								0			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_38		421456.2667	3863367.3118						6.5	43.5	6	3	0.5	1	01/08/05		GEO	Rock								0			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_4	S-20_C4	421462.0579	3863363.3494	421462.0579	3863363.197	0.152	0.216	0.216	25.5	30.5	102	71	0.5	-1	01/08/05		CD	Wire		72	0.25					1			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_40		421459.3147	3863355.7294						16.5	5.5	7	5	-1	0	01/08/05		CD	Nail		3	0.25					0			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_46		421460.2291	3863358.4726						19.5	14.5	6	5	1	1	01/08/05		CD	Metal	2 x 2		0.25	12	0			0			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_8		421454.5784	3863360.7449	421454.7621	3863360.024	0.744	0.744	0.744	1.0	22.0	67	150	0	0	01/08/05		CD	Wire		72	0.25					0			1/11/2005	RLF				YES	AJP	3/5/2005
S-20_9	S-20_C16	421454.4670	3863357.4350	421454.7987	3863357.265	0.373	0.659	0.659	0.6	11.1	55	34	-1	0	01/08/05		CD	Brick								1			1/11/2005	RLF				YES	AJP	3/5/2005

APPENDIX G
SITE MANAGER/SUXOS DAILY DOCUMENTATION

DAILY OPERATIONS SUMMARY

1/4/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive		
(5) Quality Control		
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance		
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap			
Non OE Scrap			

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	17A	10	Site set up
UXOSO/QC	17A	10	Site set up
Tech III	17A	20	Site set up
Tech II	17A	60	Site set up
Tech I	17A	20	Site set up
Equipment Operator	17A	10	Site set up
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	17A	10	Ford F350 4 X 4
Radio Handheld	17A	20	
Schonstedt, 52CX	17A	10	
Copier 6110	17A	10	

5. Operational Remarks:

Site personnel arrived and were given a site briefing by the SUXOS and the Safety Officer. NAVEA personnel assisted by Zapata employees, started reacquiring anomalies in 40P, grids R11, 12 &13. United Rentals delivered one truckload of steel trench barricades for grid 17. After reviewing the heavy equipment requirements to move and set up these barricades, the SUXOS determined that it was going to be unfeasible to use them and stopped further delivery. Sunbelt rentals delivered a trachoe and a backhoe to the site. They were asked about their barricade types and availability to see if they could provide a suitable replacement. Equipment check out and set up continued. A bobcat with a forklift attachment was requested from Sunbelt. The Golf Course Manager met with the SUXOS and requested Zapata to coordinate the excavation work next week to allow them access to hole # 10 Monday & Tuesday of next week.

6. Signature / Date:

Date: 1/4/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

1/5/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive		
(5) Quality Control		
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance		
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap			
Non OE Scrap			

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	17A	10	Site set up
UXOSO/QC	17A	10	Site set up
Tech III	17A	20	Site set up
Tech II	17A	52	Site set up
Tech I	17A	20	Site set up
Equipment Operator	17A	10	Site set up
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	17A	10	Ford F350 4 X 4
Radio Handheld	17A	20	
Schonstedt, 52CX	17A	10	
Copier 6110	17A	10	

5. Operational Remarks:

NAVEA personnel assisted by Zapata employees, continued to reacquire anomalies in 40P, grids R11, 12 &13. Sunbelt rentals delivered a bobcat to the site. In a conversation with United Rentals, a suitable barricade was ordered and will be delivered to the site tomorrow. The Type I magazines were cleared of fallen trees and brush. It was learned that in order to get a permit to store explosives in the magazines on site, one Zapata employee will need to obtain a SC blasters license and two other permits were required. The state office regulating explosives in SC was helpful in providing a date & time for the exam this Friday in Columbia. They also provided state regulations to study, and said that if all the other permit requests were brought to their office after the exam was complete, they would process them right away. Jeff Donders decided he did not want to work at this site, so the SUXOS sent him home after two hours worked. The SUXOS notified the Golf Course Manager that they will be able to keep hole # 10 operational Monday & Tuesday of next week. The carport frame for the pits in grid 17 was scheduled for delivery on next Friday.

6. Signature / Date:

Date: 1/5/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

1/6/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive		
(5) Quality Control		
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance		
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap			
Non OE Scrap			

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	17A	10	Site set up
UXOSO/QC	17A	10	Site set up
Tech III	17A	20	Site set up
Tech II	17A	54.5	Site set up
Tech I	17A	20	Site set up
Equipment Operator	17A	10	Site set up
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	17A	10	Ford F350 4 X 4
Radio Handheld	17A	20	
Schonstedt, 52CX	17A	10	
Copier 6110	17A	10	

5. Operational Remarks:

NAVEA personnel assisted by Zapata employees, continued to reacquire anomalies. Team personnel read the work plan. Local contractors were contacted for security watch and fences to be erected around the magazines. Set up and preparations continued.

6. Signature / Date:

Date: 1/6/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

1/7/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive		
(5) Quality Control		
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance		
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap			
Non OE Scrap			

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	17A	10	Site set up
UXOSO/QC	10	10	Site set up
Tech III	17A	5	Site set up
Tech III	10	14	Site set up
Tech II	10	60	Site set up
Tech I	10	20	Site set up
Equipment Operator	10	10	Site set up
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	10	10	Ford F350 4 X 4
Radio Handheld	10	20	
Schonstedt, 52CX	10	10	
Copier 6110	17A	10	

5. Operational Remarks:

NAVEA personnel assisted by Zapata employees, continued to reacquire anomalies. Contractors erected a carport frame to be used as a structure to support fire retardant tarps over the pits in grid 17. Team personnel built up a trench box barricade around the fire tarp frame. The SUXOS took a South Carolina Blaster's exam in Columbia, SC. The exam was passed and the license will be mailed to Charlotte.

6. Signature / Date:

Date: 1/7/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

1/10/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive		
(5) Quality Control		
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance		
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap		**1 lbs**	**L16, Pit #3 Team 3**
Non OE Scrap			

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	17A	10	Admin
UXOSO	17A	4	Safety Supervisin
UXOSO	10	6	Safety Supervision
UXOQC	10	1	QC Inspection
Tech III	17A	20	Intrusive
Tech III	10	10	Intrusive
Tech II	17A	54	Intrusive
Tech II	10	10	Intrusive
Tech I	17A	20	Intrusive
Equipment Operator	10	10	Intrusive
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	17A	10	Ford F350 4 X 4
Radio Handheld	17A	40	
Schonstedt, 52CX	17A	30	
Copier 6110	17A	10	

5. Operational Remarks:

NAVEA personnel continued to reacquire anomalies. Grid sheets were modified to fit a 8"x11" page and printed for the UXO teams use. A security fence company arrived to start the erection of the fence for the magazines. The EPDS was set up for intrusive operations on grid 17. Teams 1, 2 & 3 began intrusive operations. Pit # 1 in grid 17 was completed, passed QC & QA. Herman Linker was temporarily assigned as and approved to be a UXOQC to inspect the grid 17 pit since there are more than 15 personnel on site. Daney Ray Gipson arrived on site and received site specific training.

6. Signature / Date:

Date: 1/10/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

1/11/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive		
(5) Quality Control		
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance		
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:
Grenade, Hand, M15 WP	3	Live	Lot 17, L16 Pit #2

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap		**175 lbs**	**L16 Pit #2 Team 3**
Non OE Scrap			

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	17A	10	Admin
UXOSO	17A	4	Safety Supervision
UXOSO	10	6	Safety Supervision
Tech III	17A	20	Intrusive
Tech III	10	10	Intrusive
Tech II	17A	54	Intrusive
Tech II	10	10	Intrusive
Tech I	17A	20	Intrusive
Equipment Operator	10	10	Intrusive
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	10	10	Ford F350 4 X 4
Radio Handheld	17A	60	
Radio Handheld	10	10	
Schonstedt, 52CX	17A	40	
Schonstedt, 52CX	10	10	
Copier 6110	17A	10	

5. Operational Remarks:

NAVEA personnel continued to reacquire anomalies. A security fence company arrived to continue the erection of the fence for the magazines. The Barricade for grid 17 was moved and positioned over anomaly pit #2. Teams 1 & 2 continued excavations in 35 P1 and 3. As dig results are faxed to the office in Charlotte, the Geophysical team are assessing the data and have revised some of the picks in the grids. Several of the revised grid sheets have been sent by e-mail to the SUXOS who modified and printed the sheets and provided them to the teams. Three live M15 WP grenades were excavated in lot 17, grid L16 Pit #2 and were turned over to the Spartanburg Police Bomb Squad Unit for disposal. Six buckets of M15 WP grenade OE scrap was collected from the same pit. After reviewing the areas projected for intrusive work tomorrow, the SUXOS notified the golf course manager that hole 10 will be available to their patrons at least through midday tomorrow and possibly longer. They will be advised again by 1000 hours.

6. Signature / Date:

Date: 1/11/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

1/12/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive		
(5) Quality Control		
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control	**Pit #2 in L16**	
(2) Quality Assurance	**Pit #2 in L16**	
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap		**10 lbs**	**L16 Pit #2 Team 3**
Non OE Scrap			

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	17A	10	Admin
UXOSO	17A	4	Safety Supervision
UXOSO	10	6	Safety Supervision
Tech III	17A	20	Intrusive
Tech III	10	10	Intrusive
Tech II	17A	60	Intrusive
Tech II	10	10	Intrusive
Tech I	17A	20	Intrusive
Equipment Operator	10	10	Intrusive
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	10	10	Ford F350 4 X 4
Radio Handheld	17A	60	
Radio Handheld	10	10	
Schonstedt, 52CX	17A	40	
Schonstedt, 52CX	10	10	
Copier 6110	17A	10	

5. Operational Remarks:

After arriving on site to start intrusive work, Team 1 noticed that one of the local residents was still in her home and had not evacuated. The SUXOS informed the teams to stand by until 0800 and if she was still in her home, to knock on her door and politely ask her to evacuate to the hotel room provided to her. At 0800 the team knocked on her door, but she would not answer. The SUXOS was talking to the State Police Bomb Squad member and asked for his assistance in evacuating Mrs. Pike. Officer Renna made several attempts knocking on her door, with no result. The SUXOS contacted the Zapata project manager and advised him of the situation. The PM called CEHNNC and informed them. Eventually the District Commander for the ACOE determined that if a resident didn't want to evacuate and signed a waiver and release of liability that Zapata UXO techs could continue to work intrusively. Mrs. Pike responded to Officer Renna's knock and agreed to sign a waiver. The amount of idle time was approximately two hours. NAVEA personnel continued to reacquire anomalies. A security fence company arrived and completed the erection of the fence for the magazines. Team 3 completed the 2nd pit in grid 17 and it was eventually passed QC and QA Inspections. Teams 1 & 2 continued excavations in 35 P1 & 3 and GC2. Team 2 had to assist the reacquire team as there was not enough separation between teams. The Public Utility employee arrived to mark underground utilities. Herman Linker was moved to fill a permanent UXOQC position after discussion between the SUXOS and PM. Daney Ray Gipson assumed the team leader position for team 1.

6. Signature / Date:

Date: 1/12/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

1/13/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive	**3**	
(5) Quality Control		
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance		
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap		**5 lbs**	**Mk II Practice Grenade (2)**
Non OE Scrap			

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	17A	10	Admin
UXOSO	17A	6	Safety Supervision
UXOSO	10	4	Safety Supervision
UXOQC	17A	5	Quality Assurance
UXOQC	10	5	Quality Assurance
Tech III	17A	20	Intrusive
Tech III	10	10	Intrusive
Tech II	17A	60	Intrusive
Tech II	10	10	Intrusive
Tech I	17A	20	Intrusive
Equipment Operator	10	10	Intrusive
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	10	10	Ford F350 4 X 4
Radio Handheld	17A	60	
Radio Handheld	10	10	
Schonstedt, 52CX	17A	40	
Schonstedt, 52CX	10	10	
Copier 6110	17A	10	

5. Operational Remarks:
NAEVA personnel continued reacquiring anomalies in S16 and M22. The UXO teams assisted moving barricades over new anomalies in L16 and continued to excavate anomalies in GC2 and 40P. Team three completed excavating anomalies 2 & 3 in L16 and QC/QA inspections passed for that dig. The CEHNNC Safety Representative believes the barricade is not needed to conduct the excavations in L16 since a 517 MSD is being observed, residents evacuated or have signed waivers. He brought this to the attention of his chain of command. Two Mk II practice hand grenades were excavated in S16.

6. Signature / Date:

Date: 1/13/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

1/17/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive	**5**	
(5) Quality Control		
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance		
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:
Grenade, Hand, WP, M15	3	Live	L16, anomaly #4 (pit #6)

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap		**12.5 lbs**	**Teams 1 &2 Intrusive**
		175 lbs	**L16 Pit #6 Team 3**
Non OE Scrap			

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	17A	5	Admin
SUXOS	10	5	Admin
UXOSO	17A	7	Safety Supervision
UXOSO	10	3	Safety Supervision
UXOQC	17A	8	Quality Assurance
UXOQC	10	2	Quality Assurance
Tech III	17A	20	Intrusive
Tech III	10	10	Intrusive
Tech II	17A	60	Intrusive
Tech II	10	10	Intrusive
Tech I	17A	20	Intrusive
Equipment Operator	10	10	Intrusive
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	10	10	Ford F350 4 X 4
Radio Handheld	17A	60	
Radio Handheld	10	10	
Schonstedt, 52CX	17A	40	
Schonstedt, 52CX	10	10	
Copier 6110	17A	10	

5. Operational Remarks:

NAVEA personnel continued to reacquire anomalies. Three live M15 WP grenades were excavated in area 17, grid L16 anomaly #4 and were turned over to the Spartanburg Police Bomb Squad Unit for disposal. Six buckets of M15 WP grenade OE scrap was collected from the same pit. Team 1 completed 2 grids in 40P and Team 2 completed 3 grids in GC2. Final preparations were completed for the magazine storage area and the State Fire Marshall Inspector was called for an inspection.

6. Signature / Date:

Date: 1/17/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

1/18/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive	**3**	
(5) Quality Control		
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance		
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap		**12 lbs**	**L16 pit #6 Team 3**
Non OE Scrap			

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	17A	5	Admin
SUXOS	10	5	Admin
UXOSO	17A	8	Safety Supervision
UXOSO	10	2	Safety Supervision
UXOQC	17A	7	Quality Assurance
UXOQC	10	3	Quality Assurance
Tech III	17A	20	Intrusive
Tech III	10	10	Intrusive
Tech II	17A	60	Intrusive
Tech II	10	10	Intrusive
Tech I	17A	20	Intrusive
Equipment Operator	10	10	Intrusive
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	10	10	Ford F350 4 X 4
Radio Handheld	17A	60	
Radio Handheld	10	10	
Schonstedt, 52CX	17A	40	
Schonstedt, 52CX	10	10	
Copier 6110	17A	10	

5. Operational Remarks:

NAVEA personnel continued to reacquire anomalies with the help of Team 1. S17 & R16 were completed and R15 was partially reacquired. Team 1 put in a total of 163 flags. Team 2 completed 3 grids and partially completed 2 other grids. Team 3 completed digging anomaly #4 in L16 and moved the barricade over Pit #1.

6. Signature / Date:

Date: 1/18/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

1/19/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive		
(5) Quality Control		
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance		
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:
Grenades, WP, M15	14	Live	L16, pit #1
Burster, M15 Grenade	1	Live	P15 anomaly 14

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap			
Non OE Scrap			

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	17A	5	Admin
SUXOS	10	5	Admin
UXOSO	17A	8	Safety Supervision
UXOSO	10	3	Safety Supervision
UXOQC	17A	7	Quality Assurance
UXOQC	10	3	Quality Assurance
Tech III	17A	20	Intrusive
Tech III	10	10	Intrusive
Tech II	17A	60	Intrusive
Tech II	10	10	Intrusive
Tech I	17A	20	Intrusive
Equipment Operator	10	10	Intrusive
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	10	10	Ford F350 4 X 4
Radio Handheld	17A	60	
Radio Handheld	10	10	
Schonstedt, 52CX	17A	40	
Schonstedt, 52CX	10	10	
Copier 6110	17A	10	

5. Operational Remarks:

NAEVA personnel continued to reacquire anomalies. Team 2 completed 1 grid and has two digs left in one more. Team 1 completed 2 grids, except that one of the grids has an anomaly that is a WP grenade pit and will need to be cleared using appropriate procedures and PPE at a later time. Team 1 also completed 50% of another grid. Team 3 excavated 75% of pit #1 in L16 and removed 14 M15 WP hand grenades. The grenades were turned over to the local police bomb squad for disposal. The local television media met with the SUXOS and the local police bomb squad to gather information about the site operations.

6. Signature / Date:

Date: 1/19/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

1/20/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive	**2**	
(5) Quality Control		
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance		
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:
Grenade, Hand WP M15	2	Live	L16, Pit #1

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap		**40 lbs**	**Team 3 L16/grid 40**
Non OE Scrap			

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	17A	5	Admin
SUXOS	10	5	Admin
UXOSO	17A	5	Safety Supervision
UXOSO	10	5	Safety Supervision
UXOQC	17A	8	Quality Assurance
UXOQC	10	2	Quality Assurance
Tech III	17A	18	Intrusive/Reacquire
Tech III	10	12	Intrusive/Reacquire
Tech II	17A	56	Intrusive/Reacquire
Tech II	10	14	Intrusive/Reacquire
Tech I	17A	18	Intrusive/Reacquire
Tech I	10	2	Intrusive/Reacquire
Equipment Operator	10	10	Intrusive
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	10	10	Ford F350 4 X 4
Radio Handheld	17A	60	
Radio Handheld	10	10	
Schonstedt, 52CX	17A	40	
Schonstedt, 52CX	10	10	
Copier 6110	17A	10	

5. Operational Remarks:

NAEVA personnel continued to reacquire anomalies. Team 1 completed 2 grids and conducted intrusive work in one more grid. Team 1 also reacquired anomalies in area 17. Team 2 conducted intrusive work in 3 grids and identified CHI anomalies that need to be reacquired. Team 3 excavated the remainder of pit #1 in L16 and removed 2 more M15 WP hand grenades. The grenades were turned over to the local police bomb squad for disposal. Team 3 then started the excavation in Grid 40, removed approximately 20 lbs of OE scrap and identified another possible WP pit. One residence is located with 517 feet of the WP pit in S16 and that resident was contacted to evacuate next Monday morning. The Golf Course owner was notified of the planned WP pit excavation in S16. An appointment was made for the Magazine inspection by the State Fire Marshall Inspector for tomorrow at mid day. The Site Safety Officer will meet with the Inspector for the inspection.

6. Signature / Date:

Date: 1/20/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

1/21/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive	**2**	
(5) Quality Control		
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance		
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap			
Non OE Scrap			

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
UXOSO	17A	2.5	Magazine Inspection
Tech III	17A	10	Reacquire
Tech III	10	5	Equipment Breakdown/Setup
Tech II	17A	40	Reacquire
Tech II	10	10	Equipment Breakdown/Setup
Tech I	17A	18	Reacquire
Equipment Operator	10	5	Equipment Breakdown/Setup
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	10	10	Ford F350 4 X 4
Radio Handheld	17A	60	
Radio Handheld	10	10	
Schonstedt, 52CX	17A	40	
Schonstedt, 52CX	10	10	
Copier 6110	17A	10	

5. Operational Remarks:

NAEVA personnel continued to reacquire anomalies. Team 2 verified CHI anomaly X & Y coordinates. Team 3 disassembled and stacked the barricade for L16 and prepared equipment for Monday's digs in S16. The UXOSO met with the SC State Fire Marshall inspector. Both magazines failed to meet the requirements and will not be permitted.

6. Signature / Date:

Date: 1/21/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

1/23/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive		
(5) Quality Control		
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance		
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap			
Non OE Scrap			

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	17A		
SUXOS	10		
UXOSO	17A		
UXOSO	10		
UXOQC	17A		
UXOQC	10		
Tech III	17A	6	Reacquire
Tech III	10		
Tech II	17A	12	Reacquire
Tech II	10		
Tech I	17A	6	Reacquire
Tech I	10		
Equipment Operator	10		
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	17A	6	Ford F350 4 X 4
Radio Handheld	17A		
Radio Handheld	10		
Schonstedt, 52CX	17A		
Schonstedt, 52CX	10		
Copier 6110	17A		

5. Operational Remarks:

Team 1 reacquired anomalies in GC2.

Signature / Date:

Date: 1/23/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

1/24/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive	**2**	
(5) Quality Control		
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance		
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:
Grenade, Hand WP M15	1	Live	S16, anomaly #1

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap		**2 lbs**	**N17**
		.75 lbs	**P12**
		10 lbs	**S16**
		10 lbs	**N14 (grid 40)**
Non OE Scrap			

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	17A	5	Admin
SUXOS	10	5	Admin
UXOSO	17A	7	Safety Supervision
UXOSO	10	3	Safety Supervision
UXOQC	17A	6	Quality Assurance
UXOQC	10	4	Quality Assurance
Tech III	17A	10	Intrusive/Reacquire
Tech III	10	20	Intrusive/Reacquire
Tech II	17A	30	Intrusive/Reacquire
Tech II	10	30	Intrusive/Reacquire
Tech I	17A	10	Intrusive/Reacquire
Tech I	10	10	Intrusive/Reacquire
Equipment Operator	10	10	Intrusive
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	10	10	Ford F350 4 X 4
Radio Handheld	17A	43	
Radio Handheld	10	32	
Schonstedt, 52CX	17A	20	
Schonstedt, 52CX	10	30	
Copier 6110	17A	10	

5. Operational Remarks:

NAEVA personnel verified the response on one anomaly in S17 and then went into town to make copies of their reacquire digsheets. When they returned they went to grids S17, 18 & 19 to capture data on anomalies that had been excavated to verify the effectiveness of the digs. Team 1 conducted intrusive work in N17completing 44 digs. Team 1 experienced 3.75 hours of down time due to non-UXO visitors. Team 2 completed 2 grids and partially completed one more. Team 3 completed excavation of the WP pit in S16 and recovered a partial M15 WP grenade with unexpended WP inside. The local bomb squad was notified and a disposal was conducted on site when the officers decided they did not want to transport a leaking WP grenade. After the shot, the UXOSO noticed water leaking from the blowhole. Team 3 also completed about 65% of the backhoe dig in grid 40.

Signature / Date:

Date: 1/24/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

1/25/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive	**6**	
(5) Quality Control		
(6) Quality Assurance	**8**	

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance	**8**	
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap		2.5 lbs	N17
		3 lbs	M17
		11.5 lbs	L16
		1.5 lbs	L17
		1.25 lbs	S15
		.25 lbs	S16
		80 lbs	N14 (grid 40)
Total		100 lbs	
Non OE Scrap		23 lbs	N17
		1.75 lbs	M17
		5.5	L16
		2 lbs	L17
		25 lbs	S14
		7.25 lbs	S15
		1.25 lbs	S16
		40 lbs	
Total		65.75 lbs	

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	17A	5	Admin
SUXOS	10	5	Admin
UXOSO	17A	4	Safety Supervision
UXOSO	10	6	Safety Supervision
UXOQC	17A	5	Quality Assurance
UXOQC	10	5	Quality Assurance
Tech III	17A	10	Intrusive
Tech III	10	20	Intrusive
Tech II	17A	30	Intrusive
Tech II	10	30	Intrusive
Tech I	17A	10	Intrusive
Tech I	10	10	Intrusive
Equipment Operator	10	10	Intrusive
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	10	10	Ford F350 4 X 4
Radio Handheld	17A	36	
Radio Handheld	10	34	
Schonstedt, 52CX	17A	20	
Schonstedt, 52CX	10	30	
Copier 6110	17A	10	

5. Operational Remarks:

Team 1 completed 3 grids in area 17 and has only one anomaly with a missing flag left to do in L16. Team 2 completed 3 grids in GC2. Team 3 continued intrusive work in the pit of Area 40, removing 80 lbs of OE scrap, 40 lbs of scrap and two unexpended smoke pots. Clean Harbors will be contacted to package, transport and destroy the smoke pots once the pit has been cleared. The CEHNNC safety representative conducted a QA inspection and passed eight grids, 2 in 40P and 6 in GC2. A conference telephone call was received from Plyler McManus and Dan Plugge to discuss the operations at Camp Croft and to determine what our production will be by COB Thursday afternoon. They are trying to determine if additional days would be required to finish the job. I informed them that I will provide a more accurate projection Thursday morning. Derek Anderson in the Zapata office in Charlotte counted anomalies that have not been excavated in GC2. I counted the remaining anomalies in Area 17. We determined that 329 anomalies remain to be excavated on the site. The UXOSO determined that the leaking water from the WP grenade blowhole was from a sprinkler system on the golf course. Directly under the blowhole was a valve for the sprinkler system. The maintenance manager for the golf course shut the water off and stopped the leak.

Signature / Date:

Date: 1/25/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

1/26/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive	**9**	
(5) Quality Control		
(6) Quality Assurance	**13**	

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance	**13**	
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap		.75 lbs	N16
		4.5 lbs	M16
		.25 lbs	M18
		3.25 lbs	N18
		15 lbs	N14 Pit in Area 40
Total		23.75 lbs	
Non OE Scrap		.25 lbs	M15
		8.5 lbs	N16
		.25 lbs	N15
		.25 lbs	M16
		.25 lbs	M18
		1.25 lbs	N18
		5 lbs	N14 Pit in Area 40
Total		15.75 lbs	

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	17A	5	Admin
SUXOS	10	5	Admin
UXOSO	17A	4	Safety Supervision
UXOSO	10	7	Safety Supervision
UXOQC	17A	4	Quality Assurance
UXOQC	10	6	Quality Assurance
Tech III	17A	11	Intrusive
Tech III	10	19	Intrusive
Tech II	17A	21.5	Intrusive
Tech II	10	38.5	Intrusive
Tech I	17A	8.5	Intrusive
Tech I	10	11.5	Intrusive
Equipment Operator	10	10	Intrusive
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	10	10	Ford F350 4 X 4
Radio Handheld	17A	32	
Radio Handheld	10	38	
Schonstedt, 52CX	17A	17	
Schonstedt, 52CX	10	33	
Copier 6110	17A	10	

5. Operational Remarks:

Team 1 completed 3 grids in area 17 and 2 grids in GC2. Team 2 completed 4 grids in Area 17. Team 3 completed intrusive work in the pit of Area 40, removing 15 lbs of OE scrap & 5 lbs of scrap. The equipment operator continued to backfill the pit in Area 40 and removed safety equipment installed on the excavator. The other Team 3 members joined up with Teams 1 & 2. The CEHNNC safety representative conducted a QA inspection and passed thirteen grids and the pit in Area 40.

Signature / Date:

Date: 1/26/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

1/27/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive	**5**	
(5) Quality Control		
(6) Quality Assurance	**14**	

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance	**14**	
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap		1 lbs	P16
		2.25 lbs	P14
Total		3.25 lbs	
Non OE Scrap		3.25 lbs	P17
		10.5 lbs	P16
		4.5 lbs	S17
		.25 lbs	P14
		15 lbs	P15
Total		33.5 lbs	

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	17A	9	Admin
SUXOS	10	1	Admin
UXOSO	17A	10	Safety Supervision
UXOQC	17A	10	Quality Assurance
Tech III	17A	30	Intrusive
Tech II	17A	60	Intrusive
Tech I	17A	20	Intrusive
Equipment Operator	17A	10	Reacquire
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	17A	10	Ford F350 4 X 4
Radio Handheld	17A	70	
Schonstedt, 52CX	17A	40	
Copier 6110	17A	10	

5. Operational Remarks:

Team 1 completed 2 grids in GC2 and team 2 completed 3 grids in GC2. This completes the areas assigned to us for completion by the COB today. Excess flags on the golf course where QA has been conducted were pulled. Team 2 broke off the end of a sprinkler system pipe during an excavation because the end of the pipe was capped off with a steel cap. This was picked by the geo team to excavate. The UXOSO met with the golf course manager to discuss repairs to their sprinkler system. It was decided that the golf course would bill Zapata approximately $300 and the golf course manager will make the repairs to both sections of pipe and to replace a valve. The project manager notified the SUXOS that we have been tasked to reacquire and excavate additional anomalies in Area 40 and 35P4 and will have an additional week to complete the work. An additional workday was scheduled tomorrow to start the reacquire for the new anomalies.

Signature / Date:

Date: 1/27/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

1/28/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive		
(5) Quality Control		
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance		
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	10	6	Admin
UXOSO	10	10	Safety Supervision
Tech III	10	24	Reacquire
Tech II	10	54	Reacquire
Tech I	10	20	Reacquire
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	10	10	Ford F350 4 X 4
Radio Handheld	10	36	
Schonstedt, 52CX	10		
Copier 6110	10	6	

5. Operational Remarks:

Teams 1 & 2 reacquired anomalies from digsheets sent to the site from the Geo team in Charlotte. Daney Ray Gipson and Robert Yates left the site at 1100 hours to demobilize. Anthony Locklear demobilized from the site first thing this morning.

Signature / Date:

Date: 1/28/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

1/31/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive	**11**	
(5) Quality Control		
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance		
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap		.25 lbs	P15
		.75 lbs	P13
		.5 lbs	N13
		.5 lbs	K22
		1 lbs	L22
Total		3 lbs	
Non OE Scrap		7.5 lbs	P13
		.5 lbs	N13
		2 lbs	N14
		5 lbs	K22
		4 lbs	L22
		1 lbs	L23
Total		20 lbs	

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	10	10	Admin
UXOSO	10	10	Safety Supervision
UXOQC	10	10	Quality Assurance
Tech III	10	20	Intrusive
Tech II	10	50	Intrusive
Tech I	10	20	Intrusive
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	10	10	Ford F350 4 X 4
Radio Handheld	10	60	
Schonstedt, 52CX	10	40	
Copier 6110	10	10	

5. Operational Remarks:

Team 1 completed 7 grids in the 35P4 area. Team 2 completed 4 grids in the 40 area. Team 2 also reacquired 81 flags in P14. 500' of 80 grain detonating cord and 50 ½ pound boosters were received by the SUXOS and was transferred to Spartanburg Police Department. At the Project Manager's request, the SUXOS sent by FedEx an eyewash station to Zapata employees at Ft. Bragg, NC.

Signature / Date:

Date: 1/31/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

2/1/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive	**3**	
(5) Quality Control		
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance		
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap		3 lbs	K21
		.25	N15
		1.75	P14
Total		5 lbs	
Non OE Scrap		3 lbs	K21
		10.25 lbs	N15
		32.25 lbs	P14
Total		45.5 lbs	

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	10	10	Admin
UXOSO	10	10	Safety Supervision
UXOQC	10	10	Quality Assurance
Tech III	10	20	Intrusive/scrap inspection
Tech II	10	50	Intrusive/scrap inspection
Tech I	10	20	Intrusive/scrap inspection
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	10	10	Ford F350 4 X 4
Radio Handheld	10	60	
Schonstedt, 52CX	10	40	
Copier 6110	10	10	

5. Operational Remarks:

Team 1 completed K21 in 35P4 and mag & dug data gaps in grids of 35P1, 3&4. Data gaps in Area 17 were checked and/or verified dug by team 3. At 1430 team 1 sorted and inspected OE scrap. Team 2 completed 2 grids in area 40. The SUXOS supervised team 1 during the OE scrap inspection and weighed, serialized and sealed full barrels. The UXOQC turned over 11 grids to the CEHNC safety representative as QA ready.

Signature / Date:

Date: 2/1/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

2/2/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive		
(5) Quality Control	**3**	
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control	**3**	
(2) Quality Assurance		
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:
OE Scrap		1.5 lbs	P13
		.5 lbs	P14
Total		2 lbs	
Non OE Scrap			
Total		lbs	

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	10	10	Admin
UXOSO	10	10	Safety Supervision
UXOQC	10	10	Quality Assurance
Tech III	10	20	Intrusive/scrap inspection
Tech II	10	50	Intrusive/scrap inspection
Tech I	10	20	Intrusive/scrap inspection
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	10	10	Ford F350 4 X 4
Radio Handheld	10	60	
Schonstedt, 52CX	10	40	
Copier 6110	10	10	

5. Operational Remarks:

Team 1 completed data gap excavations in grids 35P1, 3 &4 and GC2, then sorted and inspected OE scrap. Team 2 completed data gap excavations in area 40. The SUXOS supervised team 1 during the OE scrap inspection and weighed, serialized and sealed full barrels. After OE scrap inspection and certification was complete, wood scrap from the property on L16 was removed. Sunbelt rentals was notified to pick up their equipment. The minature barricades were transported and stored in the bunkers by the office trailer. Team members were debriefed by the SUXOS.

Signature / Date:

Date: 2/2/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

2/3/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive		
(5) Quality Control		
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance		
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS			
UXOSO			
UXOQC			
Tech III			
Tech II			
Tech I			
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	10		
Radio Handheld	10		
Schonstedt, 52CX	10		
Copier 6110	10		

5. Operational Remarks:

Team members demobilized from the site.

Signature / Date:

Date: 2/3/2005

SUXO / Project Manager

DAILY OPERATIONS SUMMARY

2/4/2005 **PAGE 1 OF 5 PAGES**

SITE / LOCATION: Former Camp Croft, Spartanburg, SC

1. WORK SUMMARY

a. Work Accomplished:	**Number Completed SPA/Grid**	**Total Remaining SPA/Grid**
(1) Survey		
(2) Mag & Flag		
(3) Geophysical		
(4) Intrusive		
(5) Quality Control		
(6) Quality Assurance		

b. Discrepancies

c. Inspection Results:	**Pass**	**Fail**
(1) Quality Control		
(2) Quality Assurance		
(3) Safety		

2. INSTRUCTIONS RECEIVED FROM CUSTOMER REPRESENTATIVE

Daily Operations Summary Con't. **PAGE 2 OF 5 PAGES**

3. UXO SUMMARY

a. UXO Located:

Type:	Quantity:	Live/Prac.:	Remarks:

Daily Operations Summary Con't. **PAGE 3 of 5 PAGES**

b. Demolition Supplies Expended:

Type:	Quantity:	Remarks:

c. Scrap Generation / Deposition:

Type:	Quantity:	Weight:	Remarks:

Daily Operations Summary Con't. **PAGE 4 of 5 PAGES**

4. Utilization

a. Daily Man-hours:

Labor Category:	Task #:	M/H Used	Remarks:
SUXOS	10	4	OE scrap admin & turn in to local dealer
UXOSO			
UXOQC			
Tech III			
Tech II			
Tech I			
Sub-Contractor Personnel (List by Category)			

Daily Operations Summary, Con't. **PAGE 5 of 5 PAGES**

b. Daily Equipment:

Description:	Task:	Hours Used:	Remarks:
Truck 1 ton	10		
Radio Handheld	10		
Schonstedt, 52CX	10		
Copier 6110	10		

5. Operational Remarks:

The SUXOS completed administrative requirements for the OE Scrap and turned in the barrels to Arrow Steel, Inc.

Signature / Date:

Date: 2/4/2005

SUXO / Project Manager

APPENDIX H
SAFETY DOCUMENTATION

SAFETY MEETING ATTENDANCE LOGS

Safety Meeting Attendance Log

Date: 2/2/05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)	PT. CLOUDY HI 41°, LO 33° WINDS NE @ 10	
Safety Meeting Topic	SCRAP INSPECTION, SAFE DRIVING	
Attendees:		

Name	Signature	Organization
Glen Childers		Zapata
Mick Doak		Zapata
John Fox		Zapata
Rick Funk		Zapata
Dan Gipson	DEMOB	Zapata
Phil Kendall		Zapata
Herman Linker		Zapata
Anthony Locklear	DEMOB	Zapata
Doug McCue		Zapata
Joel Morrell		Zapata
Norm Schwalm		Zapata
Bryce Vroman		Zapata
Richard White		Zapata
Rob Yates	DEMOB	Zapata
Anthony Jones	DEMOB	NAEVA
Rob Bulford	DEMOB	NAEVA
Mike Slovak		USACE
Verified By: Glen T. Farmer, UXOSO		Zapata

Safety Meeting Attendance Log

Date: 2/1/05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)	PT. CLOUDY HI 48° LO 35° WINDS NE @ 10mph	
Safety Meeting Topic	SLIPS, TRIPS, FALLS - SPIDERS	
Attendees:		

Name	Signature	Organization
Glen Childers		Zapata
Mick Doak		Zapata
John Fox		Zapata
Rick Funk		Zapata
Dan Gipson	DEMOB	Zapata
Phil Kendall	SICK	Zapata
Herman Linker		Zapata
Anthony Locklear	DEMOB	Zapata
Doug McCue		Zapata
Joel Morrell		Zapata
Norm Schwalm		Zapata
Bryce Vroman		Zapata
Richard White		Zapata
Rob Yates	DEMOB	Zapata
Anthony Jones	DEMOB	NAEVA
Rob Bulford	DEMOB	NAEVA
Mike Slovak		USACE
Verified By: Glen T. Farmer, UXOSO		Zapata

Safety Meeting Attendance Log

Date: 1/31/05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)	CLEAR 49°, LO 31° WIND NE @ 10	
Safety Meeting Topic	SLIPS, TRIPS, FALLS - EZ	
Attendees:		

Name	Signature	Organization
Glen Childers		Zapata
Mick Doak		Zapata
John Fox		Zapata
Rick Funk		Zapata
Dan Gipson	DEMOB	Zapata
Phil Kendall		Zapata
Herman Linker		Zapata
Anthony Locklear	DEMOB	Zapata
Doug McCue		Zapata
Joel Morrell		Zapata
Norm Schwalm		Zapata
Bryce Vroman		Zapata
Richard White		Zapata
Rob Yates	DEMOB	Zapata
Anthony Jones	DEMOB	NAEVA
Rob Bulford	DEMOB	NAEVA
Mike Slovak		USACE
Verified By: Glen T. Farmer, UXOSO		Zapata

Safety Meeting Attendance Log

Date: 1/28/05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)	PT. CLOUDY HI 38, LO 25 WIND N 15-20	
Safety Meeting Topic	WEATHER, DAILY OPS	
Attendees:		

Name	Signature	Organization
Glen Childers		**Zapata**
Mick Doak		**Zapata**
John Fox		**Zapata**
Rick Funk		**Zapata**
Dan Gipson		**Zapata**
Phil Kendall	OFF-SITE	**Zapata**
Herman Linker	OFF-SITE	**Zapata**
Anthony Locklear	DEMOB	**Zapata**
Doug McCue		**Zapata**
Joel Morrell		**Zapata**
Norm Schwalm		**Zapata**
Bryce Vroman		**Zapata**
Richard White		**Zapata**
Rob Yates		**Zapata**
Anthony Jones	DEMOB	**NAEVA**
Rob Bulford	DEMOB	**NAEVA**
Verified By: Glen T. Farmer, SSHO		**Zapata**

Safety Meeting Attendance Log

Date: 1/27/05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)	CLEAR HI 53° LO 24° WIND NE 15-20mph	
Safety Meeting Topic	DAILY OPS, PUBLIC SAFETY, SLIPS-TRIPS-FALLS	

Attendees:

Name	Signature	Organization
Glen Childers		Zapata
Mick Doak		Zapata
John Fox		Zapata
Rick Funk		Zapata
Dan Gipson		Zapata
Phil Kendall		Zapata
Herman Linker		Zapata
Anthony Locklear		Zapata
Doug McCue		Zapata
Joel Morrell		Zapata
Norm Schwalm		Zapata
Bryce Vroman		Zapata
Richard White		Zapata
Rob Yates		Zapata
Anthony Jones	OFF-SITE	NAEVA
Rob Bulford	OFF-SITE	NAEVA
Mike Slovak		USACE
Tim HENDRIX		ZAPATA
Verified By: Glen T. Farmer, UXOSO		Zapata

Safety Meeting Attendance Log

Date: 1/26/05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)	PT. CLOUDY, HI 62° LO 35° WIND WEST 10-15	
Safety Meeting Topic	INTRUSIVE OPS, HYDRATION	
Attendees:		

Name	Signature	Organization
Glen Childers		Zapata
Mick Doak		Zapata
John Fox		Zapata
Rick Funk		Zapata
Dan Gipson		Zapata
Phil Kendall		Zapata
Herman Linker		Zapata
Anthony Locklear		Zapata
Doug McCue		Zapata
Joel Morrell		Zapata
Norm Schwalm		Zapata
Bryce Vroman		Zapata
Richard White		Zapata
Rob Yates		Zapata
Anthony Jones	OFF-SITE	NAEVA
Rob Bulford	OFF-SITE	NAEVA
Mike Slovak		USACE
Verified By: Glen T. Farmer, UXOSO		Zapata

Safety Meeting Attendance Log

Date: 1/25/05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)	CLEAR HI 54°, LO 39° WIND SW10	
Safety Meeting Topic	SAFE SEPARATION), WP	
Attendees:		

Name	Signature	Organization
Glen Childers		**Zapata**
Mick Doak		**Zapata**
John Fox		**Zapata**
Rick Funk		**Zapata**
Dan Gipson		**Zapata**
Phil Kendall		**Zapata**
Herman Linker		**Zapata**
Anthony Locklear		**Zapata**
Doug McCue		**Zapata**
Joel Morrell		**Zapata**
Norm Schwalm		**Zapata**
Bryce Vroman		**Zapata**
Richard White		**Zapata**
Rob Yates		**Zapata**
Anthony Jones	OFF-SITE	**NAEVA**
Rob Bulford	OFF-SITE	**NAEVA**
Mike Slovak		**USACE**
Verified By: Glen T. Farmer, UXOSO		Zapata

Safety Meeting Attendance Log

Date: 1/24/05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)	CLEAR 44°, LO 29° WINDS SW	
Safety Meeting Topic	INTRUSIVE OPS	
Attendees:		

Name	Signature	Organization
Glen Childers		Zapata
Mick Doak		Zapata
John Fox		Zapata
Rick Funk		Zapata
Dan Gipson		Zapata
Phil Kendall		Zapata
Herman Linker		Zapata
Anthony Locklear		Zapata
Doug McCue		Zapata
Joel Morrell		Zapata
Norm Schwalm		Zapata
Bryce Vroman		Zapata
Richard White		Zapata
Rob Yates		Zapata
Anthony Jones		NAEVA
Rob Bulford		NAEVA
MICHAEL SLOVAK		CGHNC
Verified By: Glen T. Farmer, SSHO		Zapata

Safety Meeting Attendance Log

Date: 23 JAN 05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)		
Safety Meeting Topic HYPOTHERMIA PPE		
Attendees:		

Name	Signature	Organization
Glen Childers		Zapata
Mick Doak		Zapata
John Fox		Zapata
Rick Funk		Zapata
Dan Gipson		Zapata
Phil Kendall		Zapata
Herman Linker		Zapata
Anthony Locklear		Zapata
Doug McCue		Zapata
Joel Morrell		Zapata
Norm Schwalm		Zapata
Bryce Vroman		Zapata
Richard White		Zapata
Rob Yates		Zapata
Anthony Jones		NAEVA
Rob Bulford		NAEVA
Verified By: Glen T. Farmer, SSHO		Zapata

Safety Meeting Attendance Log

Date: 2/JAN05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)		
Safety Meeting Topic		
Attendees:		

Name	Signature	Organization
Glen Childers		**Zapata**
Mick Doak		**Zapata**
John Fox		**Zapata**
Rick Funk		**Zapata**
Dan Gipson		**Zapata**
Phil Kendall		**Zapata**
Herman Linker		**Zapata**
Anthony Locklear		**Zapata**
Doug McCue		**Zapata**
Joel Morrell		**Zapata**
Norm Schwalm		**Zapata**
Bryce Vroman		**Zapata**
Richard White		**Zapata**
Rob Yates		**Zapata**
Anthony Jones		**NAEVA**
Rob Bulford		**NAEVA**
Mike Slovak		**USACE**
Verified By: Glen T. Farmer, UXOSO		Zapata

Safety Meeting Attendance Log

Date: 1/20/05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)	PT. CLOUDY HI 50° LO 29° WINDS SW @ 5-10	
Safety Meeting Topic	WP, MOFB	
Attendees:		

Name	Signature	Organization
Glen Childers		Zapata
Mick Doak		Zapata
John Fox		Zapata
Rick Funk		Zapata
Dan Gipson		Zapata
Phil Kendall		Zapata
Herman Linker		Zapata
Anthony Locklear		Zapata
Doug McCue		Zapata
Joel Morrell		Zapata
Norm Schwalm		Zapata
Bryce Vroman		Zapata
Richard White		Zapata
Rob Yates		Zapata
Anthony Jones		NAEVA
Rob Bulford		NAEVA
Mike Slovak		USACE
Verified By: Glen T. Farmer, UXOSO		Zapata

Safety Meeting Attendance Log

Date: 1/19/05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)	CLEAR HI 43°, LO 30° WINDS SW 10-12	
Safety Meeting Topic	DAILY OPS, ENGINEERING CONTROLS	
Attendees:		

Name	Signature	Organization
Glen Childers		Zapata
Mick Doak		Zapata
John Fox		Zapata
Rick Funk		Zapata
Dan Gipson		Zapata
Phil Kendall		Zapata
Herman Linker		Zapata
Anthony Locklear		Zapata
Doug McCue		Zapata
Joel Morrell		Zapata
Norm Schwalm		Zapata
Bryce Vroman		Zapata
Richard White		Zapata
Rob Yates		Zapata
Anthony Jones		NAEVA
Rob Bulford		NAEVA
Mike Slovak		USACE
Verified By: Glen T. Farmer, UXOSO		Zapata

Safety Meeting Attendance Log

Date: 1/18/05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)	CLEAR HI 38°, LO 18°, WIND NW @ 10	
Safety Meeting Topic	COLD STRESS, EMERGENCY SIGNALS	
Attendees:		

Name	Signature	Organization
Glen Childers		**Zapata**
Mick Doak		**Zapata**
John Fox		**Zapata**
Rick Funk		**Zapata**
Dan Gipson		**Zapata**
Phil Kendall		**Zapata**
Herman Linker		**Zapata**
Anthony Locklear		**Zapata**
Doug McCue		**Zapata**
Joel Morrell		**Zapata**
Norm Schwalm		**Zapata**
Bryce Vroman		**Zapata**
Richard White		**Zapata**
Rob Yates		**Zapata**
Anthony Jones		**NAEVA**
Rob Bulford		**NAEVA**
Mike Slovak		**USACE**
Verified By: Glen T. Farmer, UXOSO		Zapata

Safety Meeting Attendance Log

Date: 1/12/05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)	CLEAR HI 40°, LO 17° WINDS N10-20	
Safety Meeting Topic	DAILY OPS, COLD STRESS	
Attendees:		

Name	Signature	Organization
Glen Childers		Zapata
Mick Doak		Zapata
John Fox		Zapata
Rick Funk		Zapata
Dan Gipson		Zapata
Phil Kendall		Zapata
Herman Linker		Zapata
Anthony Locklear		Zapata
Doug McCue		Zapata
Joel Morrell		Zapata
Norm Schwalm		Zapata
Bryce Vroman		Zapata
Richard White		Zapata
Rob Yates		Zapata
Anthony Jones		NAEVA
Rob Bulford		NAEVA
Mike Slovak		USACE
Verified By: Glen T. Farmer, UXOSO		Zapata

Safety Meeting Attendance Log

Date: 1/13/05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)	HI 68, LO 45 WIND SOUTH 15-25	
Safety Meeting Topic	DAILY OPS, VEHICLES	
Attendees:		

Name	Signature	Organization
Glen Childers		Zapata
Mick Doak		Zapata
John Fox		Zapata
Rick Funk		Zapata
Dan Gipson		Zapata
Phil Kendall		Zapata
Herman Linker		Zapata
Anthony Locklear		Zapata
Doug McCue		Zapata
Joel Morrell		Zapata
Norm Schwalm		Zapata
Bryce Vroman		Zapata
Richard White		Zapata
Rob Yates		Zapata
Anthony Jones		NAEVA
Rob Bulford		NAEVA
MIKE SLOVAK		USACE
Verified By: Glen T. Farmer, SSHO		Zapata

Safety Meeting Attendance Log

Date: 1/12/05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)	Hi 68° Lo 53° winds 5-15	
Safety Meeting Topic	DAILY OPS, HYDRATION	
Attendees:		

Name	Signature	Organization
Glen Childers		**Zapata**
Mick Doak		**Zapata**
John Fox		**Zapata**
Rick Funk		**Zapata**
Dan Gipson		**Zapata**
Phil Kendall		**Zapata**
Herman Linker		**Zapata**
Anthony Locklear		**Zapata**
Doug McCue		**Zapata**
Joel Morrell		**Zapata**
Norm Schwalm		**Zapata**
Bryce Vroman		**Zapata**
Richard White		**Zapata**
Rob Yates		**Zapata**
Anthony Jones		**NAEVA**
Rob Bulford		**NAEVA**
MIKE SLOVAK		CEHNC
Verified By: Glen T. Farmer, SSHO		**Zapata**

Safety Meeting Attendance Log

Date: 1/11/05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)	HI 70°, LO 50° LIGHT WINDS	
Safety Meeting Topic	OPERATIONS SAFETY, VEHICLES	
Attendees:		

Name	Signature	Organization
Glen Childers		Zapata
Mick Doak		Zapata
John Fox		Zapata
Rick Funk		Zapata
Dan Gipson		Zapata
Phil Kendall		Zapata
Herman Linker		Zapata
Anthony Locklear		Zapata
Doug McCue		Zapata
Joel Morrell		Zapata
Norm Schwalm		Zapata
Bryce Vroman		Zapata
Richard White		Zapata
Rob Yates		Zapata
Anthony Jones		NAEVA
Rob Bulford		NAEVA
MIKE SLOVAK		CEHNC
Verified By: Glen T. Farmer, SSHO		Zapata

Safety Meeting Attendance Log

Date: 1/10/05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)	H 70°, L 52° WIND SW @ 10	
Safety Meeting Topic	INTRUSIVE ACTIVITIES	
Attendees:		

Name	Signature	Organization
Glen Childers		Zapata
Mick Doak		Zapata
John Fox		Zapata
Rick Funk		Zapata
Dan Gipson		Zapata
Phil Kendall		Zapata
Herman Linker		Zapata
Anthony Locklear		Zapata
Doug McCue		Zapata
Joel Morrell		Zapata
Norm Schwalm		Zapata
Bryce Vroman		Zapata
Richard White		Zapata
Rob Yates		Zapata
Anthony Jones		NAEVA
Rob Bulford		NAEVA
Jeff Schwab		Zapata
MICHAEL SLOVAK		USACE
Verified By: Glen T. Farmer, SSHO		Zapata

Safety Meeting Attendance Log

Date: 1/7/05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)	PT CLOUDY HI 62 LO 50 WIND 5-15	
Safety Meeting Topic	PROPER LIFTING, HEAVY EQUIPMENT	
Attendees:		

Name	Signature	Organization
Glen Childers		Zapata
Mick Doak		Zapata
John Fox		Zapata
Rick Funk		Zapata 215 x321
Phil Kendall		Zapata
Herman Linker		Zapata
Anthony Locklear		Zapata
Doug McCue	OFF SITE	Zapata
Norm Schwalm		Zapata
Bryce Vroman		Zapata
Richard White		Zapata
Rob Yates		Zapata
JOEL MORRELL		Zapata
Anthony Jones		NAEVA
Rob Bulford		NAEVA
Verified By:		
Glen T. Farmer, UXOSO Site Safety and Health		

Safety Meeting Attendance Log

Date: 1/6/05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)	SHOWERS HI 68, LO 50 WIND SW 5-10	
Safety Meeting Topic	WP, HOUSEKEEPING	
Attendees:		

Name	Signature	Organization
Glen Childers		Zapata
Mick Doak		Zapata
John Fox		Zapata
Rick Funk	OFF-SITE	Zapata
Phil Kendall		Zapata
Herman Linker		Zapata
Anthony Locklear		Zapata
Doug McCue		Zapata
Norm Schwalm		Zapata
Bryce Vroman		Zapata
Richard White		Zapata
Rob Yates		Zapata
		Zapata
Anthony Jones		NAEVA
Rob Bulford		NAEVA
Verified By:		
Glen T. Farmer, UXOSO Site Safety and Health		

Safety Meeting Attendance Log

Date: 1/05/05	**Time:** 0700	**Contract Number DACA87-00-D-0034**
Delivery Order Number: 0014	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)	PT. CLOUDY HI 72 LO 53 WIND SW 5-15	
Safety Meeting Topic	FIRST AID KITS, HEAT STRESS	
Attendees:		

Name	Signature	Organization
Glen Childers		Zapata
Mick Doak		Zapata
Jeffery Donders		Zapata
John Fox		Zapata
Rick Funk	OFF-SITE	Zapata
Phil Kendall		Zapata
Herman Linker		Zapata
Anthony Locklear		Zapata
Doug McCue		Zapata
Norm Schwalm		Zapata
Bryce Vroman		Zapata
Richard White		Zapata
ROB YATES		Zapata
TIM HENDRIX		Zapata
Anthony Jones		NAEVA
Rob Bulford		NAEVA
Verified By:		
Glen T. Farmer, UXOSO		

Safety Meeting Attendance Log

Date: 11/4/05	**Time:** 0700	**Contract Number**
Delivery Order Number:	**Location: FORMER CAMP CROFT**	
Weather Conditions: (Low/High Temp, Wind/Speed/Dir) (Severe Weather)	PT. CLOUDY, HI 68, LO 52 WIND 5-10 MPH	
Safety Meeting Topic	GENERAL SITE SAFETY	
Attendees:		

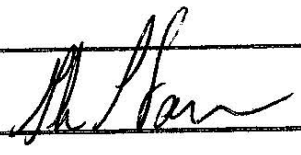
Name	Signature	Organization
John Fox		EXT. STAY Rm. 216 EXT 380 Zapata 220-232-4941 (CELL)
HERMAN LINKER		Rm 124 EXT 463 Zapata
Mick Doak		Rm 213 EXT 323 Zapata CELL 850-358-8389
Tim Rose		Rm 252 EXT 371 Zapata
Bryce Vroman		Rm 151 EXT 448 Zapata
Jeffery T Dowders		HOME Zapata 301-281-6869
PHIL KENDALL		Rm 219 EXT 317 Zapata
Norm Schwalm		Rm 229 EXT 307 Zapata
Rob Yates		Rm 231 EXT 305 Zapata
GLEN CHILDERS		Zapata 864-415-2802
RICHARD WHITE		Rm 113 EXT 422 Zapata
ANTHONY LOCKLEAR		Rm. 154 EXT 451 Zapata 910-318-3500
DOUG MCCUE		HOME C828-289-2656 Zapata H828-288-2116
		Zapata
ANTHONY JONES		FAIRFIELD NAEVA 223 434-825-0934
Rob Bulford		Rm 416 NAEVA 434-455-8010
Verified by:		
Glen T. Farmer Site Safety and Health		HOME 864-579-9964 ZAPATA C 864-978-0342

DAILY QUALITY CONTROL/SAFETY INSPECTION LOGS

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 2/2/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1,2	✓	
Morning Magnetometer check			
Vehicle condition (weekly)			
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)			
Proper grid layout			
Proper search techniques / Site control (daily)	1,2	✓	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)	1, SUXOS	✓	
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)	N/A		

QCS SIGNATURE: 

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 2/1/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1, 2	✓	
Morning Magnetometer check			
Vehicle condition (weekly)			
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)			
Proper grid layout			
Proper search techniques / Site control (daily)	1, 2	✓	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)	1, QC, SUXOS	✓	
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

QCS SIGNATURE: 

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 1/31/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1, 2	✓	
Morning Magnetometer check			
Vehicle condition (weekly)	1, 2		✓
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)	1, 2	✓	
Proper grid layout			
Proper search techniques / Site control (daily)			
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)	N/A		
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

BAD FRONT RIGHT TIRE ON PICK-UP

QCS SIGNATURE: [signature]

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 1/28/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1,2	✓	
Morning Magnetometer check			
Vehicle condition (weekly)			
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)			
Proper grid layout			
Proper search techniques / Site control (daily)	1,2	✓	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)	N/A		
Field office grounds/site trailer		✓	
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

QCS SIGNATURE: 

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 1/27/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1,2	✓	
Morning Magnetometer check			
Vehicle condition (weekly)			
Equipment condition	1,2	✓	
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)			
Proper grid layout			
Proper search techniques / Site control (daily)			
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)			
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

QCS SIGNATURE:

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 1/26/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1,2,3	✓	
Morning Magnetometer check			
Vehicle condition (weekly)			
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)			
Proper grid layout			
Proper search techniques / Site control (daily)	1,2,3	✓	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)	D/A		
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

QCS SIGNATURE: 

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 1/25/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1,2,3	✓	
Morning Magnetometer check			
Vehicle condition (weekly)	1,3	✓	
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)	1,2,3	✓	
Proper grid layout			
Proper search techniques / Site control (daily)	1,2,3	✓	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)	N/A		
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

QCS SIGNATURE: 

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 1/24/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1,2,3	✓	
Morning Magnetometer check			
Vehicle condition (weekly)			
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)			
Proper grid layout			
Proper search techniques / Site control (daily)	1,2,3	✓	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)	N/A		
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

QCS SIGNATURE: 

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 1/20/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1,2,3	✓	
Morning Magnetometer check	1,2,3	✓	
Vehicle condition (weekly)			
Equipment condition	1,2,3	✓	
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)			
Proper grid layout			
Proper search techniques / Site control (daily)			
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)	D/A		
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

QCS SIGNATURE: [signature]

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 1/19/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1,2,3	✓	
Morning Magnetometer check			
Vehicle condition (weekly)			
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)			
Proper grid layout			
Proper search techniques / Site control (daily)	1,2,3	✓	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)	N/A		
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)	N/A		

QCS SIGNATURE: 

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 1/18/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1,2,3	✓	
Morning Magnetometer check			
Vehicle condition (weekly)			
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)			
Proper grid layout	1,2	✓	
Proper search techniques / Site control (daily)	1,2,3	✓	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)	N/A		
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)	N/A		

QCS SIGNATURE: 

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 1/17/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1,2,3	✓	
Morning Magnetometer check			
Vehicle condition (weekly)			
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)	1,2,3	✓	
Proper grid layout			
Proper search techniques / Site control (daily)	1,2,3	✓	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)		✓	
Mapping and UXO grid data			
UXO scrap inspection (daily)	2,3	✓	
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

QCS SIGNATURE:

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 1/13/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1,2,3	✓	
Morning Magnetometer check			
Vehicle condition (weekly)	(1,2) 3	✓	
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)			
Proper grid layout			
Proper search techniques / Site control (daily)	1,2,3	✓	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)	1	✓	
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

QCS SIGNATURE:

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE:	**PROJECT ~~Galloway~~** CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	**TEAM**	**SAT**	**UNSAT**
Proper work attire (PPE) (daily)	1,2,3	✓	
Morning Magnetometer check			
Vehicle condition (weekly)			
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)			
Proper grid layout			
Proper search techniques / Site control (daily)	1,2,3	✓	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)		✓	
Mapping and UXO grid data			
UXO scrap inspection (daily)			
Field office grounds/site trailer		✓	
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)	N/A		

QCS SIGNATURE: Terry Farmer

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 1/10/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1,2,3	✓	
Morning Magnetometer check	1,2,3	✓	
Vehicle condition (weekly)			
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)			
Proper grid layout			
Proper search techniques / Site control (daily)	1,2,3	✓	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)	3	✓	
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)	N/A		

QCS SIGNATURE: Terry Farmer

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 1/11/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1,2,3	✓	
Morning Magnetometer check			
Vehicle condition (weekly)			
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)			
Proper grid layout			
Proper search techniques / Site control (daily)	1,2,3	✓	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)	3	✓	
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)	N/A		

QCS SIGNATURE: Terry Farmer

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 1/19/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1,2,3	✓	
Morning Magnetometer check			
Vehicle condition (weekly)			
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)			
Proper grid layout			
Proper search techniques / Site control (daily)	1,2,3	✓	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)	N/A		
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)	N/A		

QCS SIGNATURE: 

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 1/18/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1,2,3	✓	
Morning Magnetometer check			
Vehicle condition (weekly)			
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)			
Proper grid layout	1,2	✓	
Proper search techniques / Site control (daily)	1,2,3	✓	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)	N/A		
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)	N/A		

QCS SIGNATURE: 

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 1/17/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1,2,3	✓	
Morning Magnetometer check			
Vehicle condition (weekly)			
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)	1,2,3	✓	
Proper grid layout			
Proper search techniques / Site control (daily)	1,2,3	✓	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)		✓	
Mapping and UXO grid data			
UXO scrap inspection (daily)	2,3	✓	
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

QCS SIGNATURE:

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 1/13/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1,2,3	✓	
Morning Magnetometer check			
Vehicle condition (weekly)	(1,2) 3	✓	
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)			
Proper grid layout			
Proper search techniques / Site control (daily)	1,2,3	✓	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)	1	✓	
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)			

QCS SIGNATURE: 

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE:	**PROJECT ~~Galloway~~** Camp Croft
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	**TEAM**	**SAT**	**UNSAT**
Proper work attire (PPE) (daily)	1,2,3	✓	
Morning Magnetometer check			
Vehicle condition (weekly)			
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)			
Proper grid layout			
Proper search techniques / Site control (daily)	1,2,3	✓	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)		✓	
Mapping and UXO grid data			
UXO scrap inspection (daily)			
Field office grounds/site trailer		✓	
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)	N/A		

QCS SIGNATURE: Terry Farmer

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 1/10/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1,2,3	✓	
Morning Magnetometer check	1,2,3	✓	
Vehicle condition (weekly)			
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)			
Proper grid layout			
Proper search techniques / Site control (daily)	1,2,3	✓	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)	3	✓	
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)	N/A		

QCS SIGNATURE: Terry Farmer

ZAPATAENGINEERING
DAILY QUALITY CONTROL/SAFETY INSPECTION LOG

DATE: 1/11/05	**PROJECT** ~~Galloway~~ CAMP CROFT
SUXOS: D. McCue	**PM: Michael Winningham**
SSO: Terry Farmer	**QCS: Terry Farmer**
MAG TYPE USED: Schonstedt	**MAG SETTING USED: 2-5**

AREA/ITEMS INSPECTED	TEAM	SAT	UNSAT
Proper work attire (PPE) (daily)	1,2,3	✓	
Morning Magnetometer check			
Vehicle condition (weekly)			
Equipment condition			
Emergency equipment, first aid kit, burn kit, fire ext. (weekly)			
Proper grid layout			
Proper search techniques / Site control (daily)	1,2,3	✓	
Proper use of grubbing equipment			
Proper tamping techniques, demo shot			
Grid QC			
Office paper work (weekly)			
Mapping and UXO grid data			
UXO scrap inspection (daily)	3	✓	
Field office grounds/site trailer			
Explosive Storage/transportation/inventory (storage is daily, inventory is weekly)	N/A		

QCS SIGNATURE: Terry Farmer

APPENDIX I
EXPLOSIVE MANAGEMENT

APPENDIX I1
EXPLOSIVE EXPENDITURES RECORDS

PerFORM (DLA) PREVIOUS EDITION MAY BE USED

DD FORM 1348-1A, JUL 91 (EG) ISSUE RELEASE/RECEIPT DOCUMENT

1 2 3 4 5 6 7	RI FROM	M/S	UI 2 3 4	QUANTITY 2 2 2 2 2 6 7 8 9	SUPPLEMENTARY ADDRESS 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80	S/ SIG	FUND	DISTRIBUTION	PROJECT	PRI	REQD DELIV DATE	ADV	RI	O/P	CONFIG

1. TOTAL PRICE — DOLLARS | CTS

2. SHIP FROM

3. SHIP TO

4. MARK FOR

UNIT PRICE DOLLARS	CTS	5. DOC DATE	6. NMFC	7. FRT RATE	8. TYPE CARGO	9. PS

10. QTY. REC'D	11.UP	12. UNIT WEIGHT	13. UNIT CUBE	14. UFC	15. SL
# 23					

16. FREIGHT CLASSIFICATION NOMENCLATURE
Grenade Hand, WP

17. ITEM NOMENCLATURE
M15

18. TY CONT	19. NO CONT	20. TOTAL WEIGHT	21. TOTAL CUBE

22. RECEIVED BY
Lt. John Dyas SCSO

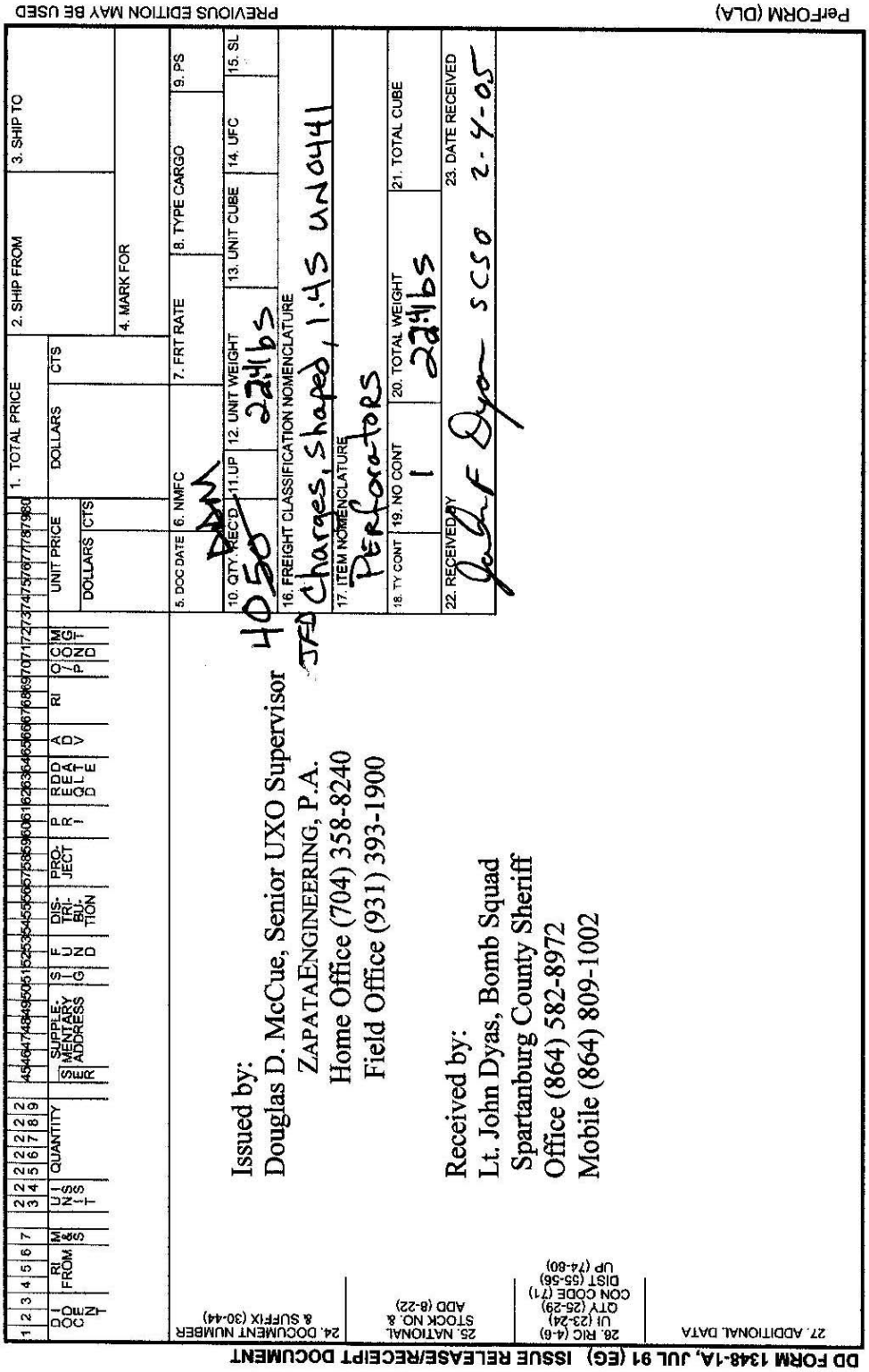
23. DATE RECEIVED
2-4-05

* Also Includes 1 M6A3 Detonating fuze used for the M15 Grenade

Issued by:
Douglas D. McCue, Senior UXO Supervisor
ZAPATAENGINEERING, P.A.
Home Office (704) 358-8240
Field Office (931) 393-1900

Received by:
Lt. John Dyas, Bomb Squad
Spartanburg County Sheriff
Office (864) 582-8972
Mobile (864) 809-1002

24. DOCUMENT NUMBER & SUFFIX (30-44)	25. NATIONAL STOCK NO. & ADD (8-22)	26. RIC (4-6) UI (23-24) QTY (25-29) CON CODE (71) DIST (55-56) UP (74-80)	27. ADDITIONAL DATA


PerFORM (DLA)
PREVIOUS EDITION MAY BE USED
DD FORM 1348-1A, JUL 91 (EG) ISSUE RELEASE/RECEIPT DOCUMENT
1. TOTAL PRICE
2. SHIP FROM
3. SHIP TO
4. MARK FOR
5. DOC DATE
6. NMFC
7. FRT RATE
8. TYPE CARGO
9. PS
10. QTY. RECD
11. UP
12. UNIT WEIGHT
13. UNIT CUBE
14. UFC
15. SL
16. FREIGHT CLASSIFICATION NOMENCLATURE
17. ITEM NOMENCLATURE
18. TY CONT
19. NO CONT
20. TOTAL WEIGHT
21. TOTAL CUBE
22. RECEIVED BY
23. DATE RECEIVED
24. DOCUMENT NUMBER & SUFFIX (30-44)
25. NATIONAL STOCK NO. & ADD (8-22)
26. RIC (4-6) UI (23-24) QTY (26-29) CON CODE (71) DIST (55-56) UP (74-80)
27. ADDITIONAL DATA
Issued by:
Douglas D. McCue, Senior UXO Supervisor
ZAPATAENGINEERING, P.A.
Home Office (704) 358-8240
Field Office (931) 393-1900
Received by:
Lt. John Dyas, Bomb Squad
Spartanburg County Sheriff
Office (864) 582-8972
Mobile (864) 809-1002
Charges, shaped, 1.4S UN0441
Perforators
22.9 lbs
1
SCSO 2-4-05

PerFORM (DLA) PREVIOUS EDITION MAY BE USED

DD FORM 1348-1A, JUL 91 (EG) ISSUE RELEASE/RECEIPT DOCUMENT

1	2	3	4	5	6	7
DI-VISION		RI FROM	M&S			

2 2 3 4	UI	2 2 5 6	QUANTITY	2 2 7 8	2 9	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
	UNIT					SUPPLE-MENTARY ADDRESS																																			
						SIGNAL CODE																																			
						FUND																																		
						DISTRIBUTION																																		
						PROJECT																																		
						PRIORITY																																		
						RDD																																		
						ADV																																		
						RI																																		
						OOP																																		
						COMD																																		

1. TOTAL PRICE			2. SHIP FROM		3. SHIP TO
DOLLARS	CTS				
			4. MARK FOR		

UNIT PRICE		5. DOC DATE	6. NMFC	7. FRT RATE	8. TYPE CARGO	9. PS
DOLLARS	CTS	1/31/05				
		10. QTY. REC'D	11.UP	12. UNIT WEIGHT	13. UNIT CUBE	14. UFC	15. SL
		500'		11 lbs.			

16. FREIGHT CLASSIFICATION NOMENCLATURE
UN0289, Cord Detonating, 1.4D

17. ITEM NOMENCLATURE
Cord, Detonating, 80 grain

18. TY CONT	19. NO CONT	20. TOTAL WEIGHT	21. TOTAL CUBE
	1	11 lbs.	

22. RECEIVED BY
Robin F Dyas

23. DATE RECEIVED
1-27-05

24. DOCUMENT NUMBER & SUFFIX (30-44)

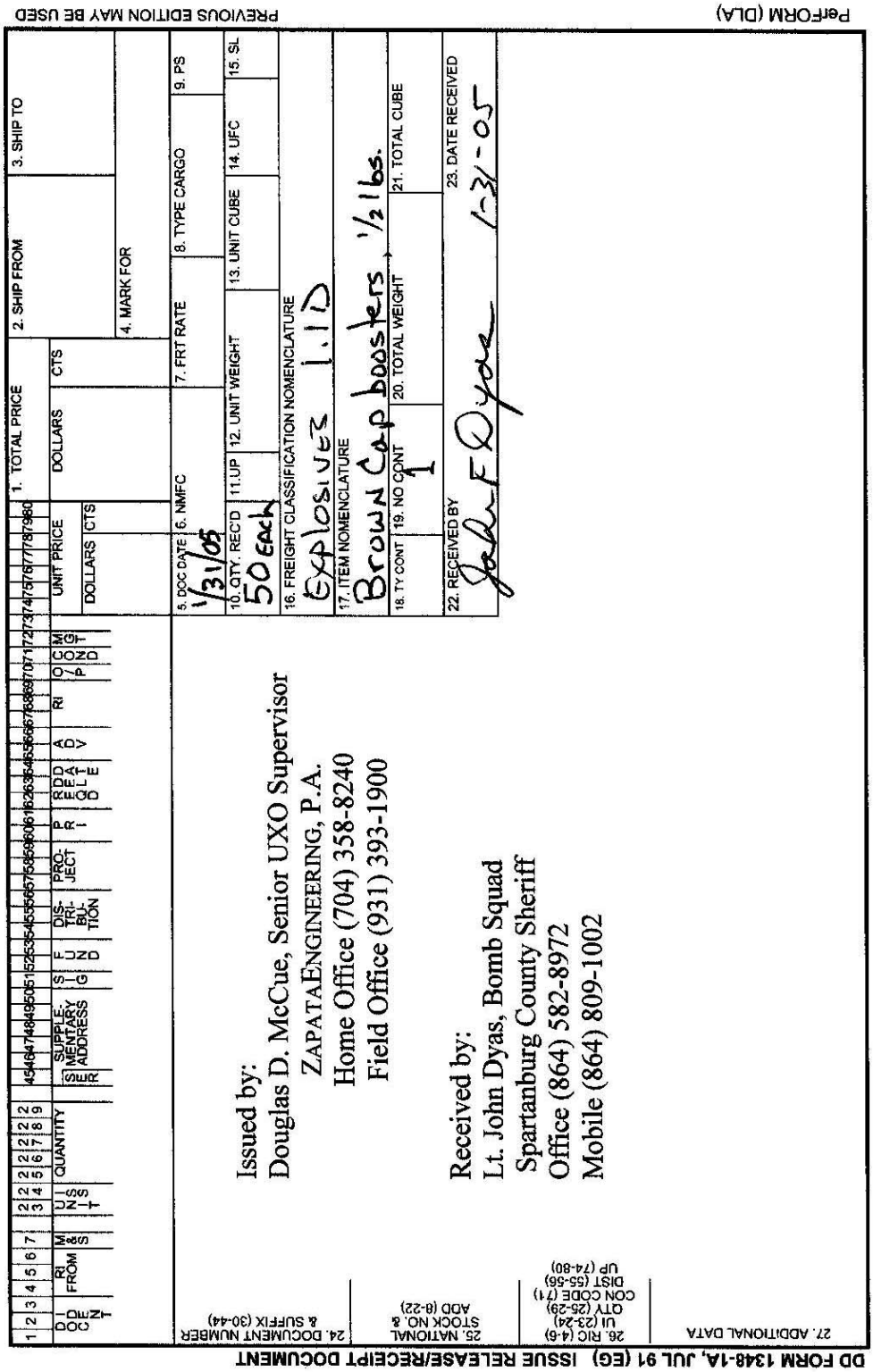
25. NATIONAL STOCK NO. & ADD (8-22)

26. RIC (4-6) UI (23-24) QTY (25-29) CON CODE (71) DIST (55-56) UP (74-80)

27. ADDITIONAL DATA

Issued by:
Douglas D. McCue, Senior UXO Supervisor
ZAPATAENGINEERING, P.A.
Home Office (704) 358-8240
Field Office (931) 393-1900

Received by:
Lt. John Dyas, Bomb Squad
Spartanburg County Sheriff
Office (864) 582-8972
Mobile (864) 809-1002


PREVIOUS EDITION MAY BE USED
PerFORM (DLA)
DD FORM 1348-1A, JUL 91 (EG) ISSUE RELEASE/RECEIPT DOCUMENT
1. TOTAL PRICE
2. SHIP FROM
3. SHIP TO
4. MARK FOR
DOLLARS
CTS
UNIT PRICE
5. DOC DATE
1/31/05
6. NMFC
7. FRT RATE
8. TYPE CARGO
9. PS
10. QTY. REC'D
50 each
11. UP
12. UNIT WEIGHT
13. UNIT CUBE
14. UFC
15. SL
16. FREIGHT CLASSIFICATION NOMENCLATURE
Explosives 1.1D
17. ITEM NOMENCLATURE
Brown Cup boosters, 1/2 lbs.
18. TY CONT
19. NO CONT
1
20. TOTAL WEIGHT
21. TOTAL CUBE
22. RECEIVED BY
John F Dyas
23. DATE RECEIVED
1-31-05
Issued by:
Douglas D. McCue, Senior UXO Supervisor
ZAPATAENGINEERING, P.A.
Home Office (704) 358-8240
Field Office (931) 393-1900
Received by:
Lt. John Dyas, Bomb Squad
Spartanburg County Sheriff
Office (864) 582-8972
Mobile (864) 809-1002
24. DOCUMENT NUMBER & SUFFIX (30-44)
25. NATIONAL STOCK NO. & ADD (8-22)
26. RIC (4-6) UI (23-24) QTY (26-29) CON CODE (71) DIST (55-56) UP (74-80)
27. ADDITIONAL DATA

APPENDIX I2
UXO ITEMS REPORT

UXO Items Report						
GRID	DATE UXO FOUND	TEAM	UXOS	UXO TYPE	QTY	REMARKS
P15	01/19/05	2	Funk	M15 Grenade Fuse Burster	1	Turned over to local authorities
L16	01/11/05	3	Yates	M15 Grenade	3	Turned over to local authorities
L16	01/17/05	3	Yates	M15 Grenade	3	Turned over to local authorities
L16	01/19/05	3	Yates	M15 Grenade	14	Turned over to local authorities
L16	01/20/05	3	Yates	M15 Grenade	2	Turned over to local authorities
S16	01/24/05	3	Yates	M15 Grenade	1	Turned over to local authorities

APPENDIX I3
GRID DATABASE

GRID DATABASE (GRID #17)

GRID	DATE GRID COMPLETED	TEAM	UXOS	UXO LOCATED/DATE	QTY	X	Y	Z	BIP_Y_N	TIME/BIP	DIGS	LBS OF UXO SCRAP	LBS OF NON UXO SCRAP	DATE_QC	QC RESULT	DATE_QA	QA RESULT	DATE OF 948 OR ACCEPTANCE	COE SAFETY OFFICER	REMARKS
N15	01/26/05	2	Funk								1	0.00	0.00	01/27/05	P					
N16	01/26/05	2	Funk								30	0.50	6.50	01/27/05	P					
N17	01/25/05	1	Gipson								50	2.50	23.00	01/26/05	P					
N18	01/26/05	1	Gipson								13	3.25	3.50	01/27/05	P					
M15	01/26/05	1	Gipson								8	0.00	0.25	01/27/05	P					
M16	01/26/05	2	Funk								24	4.50	0.25	01/27/05	P					
M17	01/25/05	1	Gipson								29	3.00	2.25	01/26/05	P					
M18	01/26/05	1	Gipson								6	0.25	0.50	01/26/05	P					
L16	01/26/05	1	Gipson	M15 Grenade 1/11/05	3	50	67	24	Y	1600	18	11.50	5.50	01/26/05	P					
L16	01/26/05	1	Gipson	M15 Grenade1/17/05	3	75	44	24	Y	1545	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
L16	01/26/05	1	Gipson	M15 Grenade 1/19/05	14	59	88	30	Y	1600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
L16	01/26/05	1	Gipson	M15 Grenade 1/20/05	2	59	88	30	Y	1600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
L17	01/25/05	1	Gipson								16	1.50	2.00	01/26/05	P					
											195	27	44							

GRID DATABASE (GRID #40)

GRID	DATE GRID COMPLETED	TEAM	UXOS	UXO LOCATED/DATE	QTY	X	Y	Z	BIP_Y_N	TIME/BIP	DIGS	LBS OF UXO SCRAP	LBS OF NON UXO SCRAP	DATE_QC	QC RESULT	DATE_QA	QA RESULT	DATE OF 948 OR ACCEPTANCE	COE SAFETY OFFICER	REMARKS
R13	No Flags	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
R14	No Flags	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
P12	No Flags	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
P13	01/31/05	2	Funk								38	0.75	7.50	02/01/05	P					3ea NC
P14	02/02/05	2	Funk								67	1.75	32.25	02/02/05	P					13ea NC
P15	01/31/05	2	Funk								8	0.25	0.00	02/01/05	P					
N13	01/31/05	2	Funk								20	0.50	0.50	02/01/05	P					
N14	01/31/05	2	Funk								38	0.00	2.00	02/01/05	P					
N15	02/01/05	2	Funk								45	0.25	10.25	02/02/05	P					
M14	No Flags	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
											216	4	53							

GRID DATABASE (GRID #40P)

GRID	DATE GRID COMPLETED	TEAM	UXOS	UXO LOCATED/DATE	QTY	X	Y	Z	BIP_Y_N	TIME/BIP	DIGS	LBS OF UXO SCRAP	LBS OF NON UXO SCRAP	DATE_QC	QC RESULT	DATE_QA	QA RESULT	DATE OF 948 OR ACCEPTANCE	COE SAFETY OFFICER	REMARKS
S12	01/18/05	2	Funk								3	0.00	0.25	01/19/05	P					2ea NC
S13																				
R11	01/13/05	2	Funk								10	0.00	2.25	01/19/05	P					
R12	01/13/05	2	Funk								24	0.25	3.25	01/19/05	P	01/26/05	P	01/26/05	Slovak	1ea NC
R13	01/17/05	2	Funk								27	0.50	0.75	01/19/05	P	01/26/05	P	01/26/05	Slovak	4ea NC
P11	01/18/05	2	Funk								4	0.00	1.00	01/19/05	P					
P12	01/24/05	2	Funk								41	0.50	2.00	01/25/05	P					1ea NC
P13	No Flags	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
N11	01/17/05	2	Funk								3	0.00	0.50	01/19/05	P	01/25/05	P	01/25/05	Slovak	
N12	01/18/05	2	Funk								5	0.00	1.25	01/19/05	P	01/25/05	P	01/25/05	Slovak	
S12	01/18/05	2	Funk								3	0.00	0.25	01/19/05	P	01/25/05	P	01/25/05	Slovak	
											107	1	9							

GRID DATABASE (GRID #GC2)

GRID	DATE GRID COMPLETED	TEAM	UXOS	UXO LOCATED/DATE	QTY	X	Y	Z	BIP_Y_N	TIME/BIP	DIGS	LBS OF UXO SCRAP	LBS OF NON UXO SCRAP	DATE_QC	QC RESULT	DATE_QA	QA RESULT	DATE OF 948 OR ACCEPTANCE	COE SAFETY OFFICER	REMARKS
T15	01/20/05	1	Gipson								14	0.00	0.75	01/25/05	P	01/25/05	P	01/25/05	Slovak	
T16	01/19/05	1	Gipson								19	2.00	1.00	01/25/05	P	01/25/05	P	01/25/05	Slovak	
T17	01/17/05	1	Gipson								8	5.00	3.00	01/25/05	P	01/25/05	P	01/25/05	Slovak	
T18	01/17/05	1	Gipson								7	0.00	6.00	01/25/05	P	01/25/05	P	01/25/05	Slovak	
S12	No Flags	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S13	01/24/05	2	Funk								23	0.00	13.00	01/25/05	P	01/25/05	P	01/25/05	Slovak	5ea NC
S14	01/25/05	2	Funk								39	0.00	25.25	01/26/05	P					2ea NC
S15	01/25/05	2	Funk								56	1.50	7.25	01/26/05	P					1ea NC
S16	01/26/05	1&2	Funk/Gipson	M15 Grenade 1/24/05	1	58	97	12			56	14.00	11.25	01/26/05	P					2ea NC
S17	01/27/05	2	Funk								31	0.00	4.50	01/27/05	P					
S18	01/12/05	2	Funk								7	0.00	1.25	01/25/05	P	01/26/05	P	01/26/05	Slovak	1ea NC
R13	01/17/05	2	Funk								13	0.00	1.00	01/19/05	P	01/26/05	P	01/26/05	Slovak	2ea NC
R14	01/26/05	1&2	Funk/Gipson								52	1.00	7.75	01/27/05	P					
R15	01/26/05	1	Gipson								52	0.00	13.50	01/27/05	P					
R16	01/26/05	1	Gipson								13	0.00	7.25	01/27/05	P					
R17	01/26/05	1	Gipson								1	0.00	0.25	01/27/05	P					
R18	01/20/05	1	Gipson								2	0.25	0.25	01/25/05	P					1ea NC
P14	01/27/05	2	Funk								4	2.25	0.25	01/27/05	P					
P15	01/27/05	2	Funk	M15 Grenade Fuse 1/19/05	1	57	89	1	Y	1600	58	1.00	4.50	01/27/05	P					Item disposed of by Local Authorities
P16	01/27/05	1	Gipson								37	1.00	19.50	01/27/05	P					
P17	01/27/05	1	Gipson								19	0.00	6.25	01/27/05	P					
N15	01/26/05	2	Funk								1	0.00	0.25	01/27/05	P					
N16	01/26/05	2	Funk								11	0.25	2.00	01/27/05	P					
											523	28	136							

GRID DATABASE (GRID #35P1)

GRID	DATE GRID COMPLETED	TEAM	UXOS	UXO LOCATED/DATE	QTY	X	Y	Z	BIP_Y_N	TIME/BIP	DIGS	LBS OF UXO SCRAP	LBS OF NON UXO SCRAP	DATE_QC	QC RESULT	DATE_QA	QA RESULT	DATE OF 948 OR ACCEPTANCE	COE SAFETY OFFICER	REMARKS
S18	01/12/05	2	Funk								9	0.00	3.25	01/25/05	P	01/26/05	P	01/26/05	Slovak	3ea NC
S19	01/19/05	2	Funk								60	0.50	5.25	01/25/05	P	01/26/05	P	01/26/05	Slovak	5ea NC
S20	01/11/05	2	Funk								24	0.00	4.00	01/25/05	P	01/26/05	P	01/26/05	Slovak	
R19	01/11/05	2	Funk								26	0.00	4.00	01/25/05	P	01/26/05	P	01/26/05	Slovak	
R20	01/11/05	2	Funk								49	0.00	1.00	01/25/05	P	01/26/05	P	01/26/05	Slovak	
											168	1	18							

GRID DATABASE (GRID #35P3)

GRID	DATE GRID COMPLETED	TEAM	UXOS	UXO LOCATED/DATE	QTY	X	Y	Z	BIP_Y_N	TIME/BIP	DIGS	LBS OF UXO SCRAP	LBS OF NON UXO SCRAP	DATE_QC	QC RESULT	DATE_QA	QA RESULT	DATE OF 948 OR ACCEPTANCE	COE SAFETY OFFICER	REMARKS
P21	01/12/05	1	Gipson								15	0.50	6.00	01/25/05	P	01/26/05	P	01/26/05	Slovak	
P22	01/11/05	1	Linker								8	0.00	4.00	01/25/05	P	01/26/05	P	01/26/05	Slovak	1ea NC
N21	01/11/05	1	Linker								24	0.00	7.00	01/25/05	P	01/26/05	P	01/26/05	Slovak	
N22	01/11/05	1	Linker								25	0.00	5.00	01/25/05	P	01/26/05	P	01/26/05	Slovak	3ea NC
M21	No Flags	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
M22	01/17/05	1	Gipson								14	0.00	7.00	01/25/05	P	01/26/05	P	01/26/05	Slovak	
											86	1	29							

GRID DATABASE (GRID #35P4)

GRID	DATE GRID COMPLETED	TEAM	UXOS	UXO LOCATED/DATE	QTY	X	Y	Z	BIP_Y_N	TIME/BIP	DIGS	LBS OF UXO SCRAP	LBS OF NON UXO SCRAP	DATE_QC	QC RESULT	DATE_QA	QA RESULT	DATE OF 948 OR ACCEPTANCE	COE SAFETY OFFICER	REMARKS
M22	01/17/05	1	Gipson/White								46	0.00	1.75	02/01/05	P	01/26/05	P	01/26/05	Slovak	Rev 4 added digs/not QA'd
L21	01/31/05	1	White								1	0.00	0.00	02/01/05	P					
L22	01/31/05	1	White								27	1.00	4.00	02/01/05	P					
L22	02/01/05	1	White								2	0.00	0.00							
L23	01/31/05	1	White								4	0.00	1.00	02/01/05	P					
K21	02/01/05	1	White								9	3.00	3.00	02/02/05	P					
K21	02/01/05	1	White								6	0.00	0.00							Digs from Data gaps
K22	01/31/05	1	White								18	0.50	5.00	02/01/05	P					
K22	02/01/05	1	White								3	0.00	0.00							Digs from Data gaps
K23	01/31/05	1	White								6	0.00	0.00	02/01/05	P					
J22	01/31/05	1	White								1	0.00	0.00	02/01/05	P					
											76	5	13							

APPENDIX J
PHOTOGRAPHS

FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA

DATE: Jan. 6, 2005 Photo # 1	
DIRECTION:	
PHOTO BY: Jeff Schwalm	
DESCRIPTION: Assembled engineering controls, Grid 17	

DATE: Jan. 6, 2005 Photo # 2	
DIRECTION:	
PHOTO BY: Jeff Schwalm	
DESCRIPTION: Engineering controls, Grid 17	

FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA

DATE: January 2005
Photo # 3

DIRECTION:

PHOTO BY:
Jeff Schwalm

DESCRIPTION:
Grid 40 OE scrap practice MKII hand grenade

DATE: January 2005
Photo # 4

DIRECTION:

PHOTO BY:
Jeff Schwalm

DESCRIPTION:
Grid 40 pit excavation

FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA

DATE: January 2005 Photo # 5 **DIRECTION:** **PHOTO BY:** Jeff Schwalm **DESCRIPTION:** Local bomb squad removing M15 grenades - Grid 17	
DATE: January 2005 Photo # 6 **DIRECTION:** **PHOTO BY:** Jeff Schwalm **DESCRIPTION:** M15 WP grenade - S16-1	

FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA

DATE: January 2005
Photo # 7

DIRECTION:

PHOTO BY:
Jeff Schwalm

DESCRIPTION:
M15 WP grenade - Grid 17

DATE: Jan. 17, 2005
Photo 8

DIRECTION:

PHOTO BY:
Jeff Schwalm

DESCRIPTION:
M69 60mm training mortar - Grid GC2

FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA

DATE: January 2005 Photo 9 **DIRECTION:** **PHOTO BY:** Jeff Schwalm **DESCRIPTION:** Miscellaneous scrap - GC2	

DATE: January 2005 Photo 10 **DIRECTION:** **PHOTO BY:** Jeff Schwalm **DESCRIPTION:** MKII practice grenade - Pit Grid 40	

FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA

DATE: Jan. 10, 2005
Photo 11

DIRECTION:

PHOTO BY:
Jeff Schwalm

DESCRIPTION:
Moving MOFB

DATE: January 2005
Photo 12

DIRECTION:

PHOTO BY:
Jeff Schwalm

DESCRIPTION:
OE scrap pit #2 - Grid 17

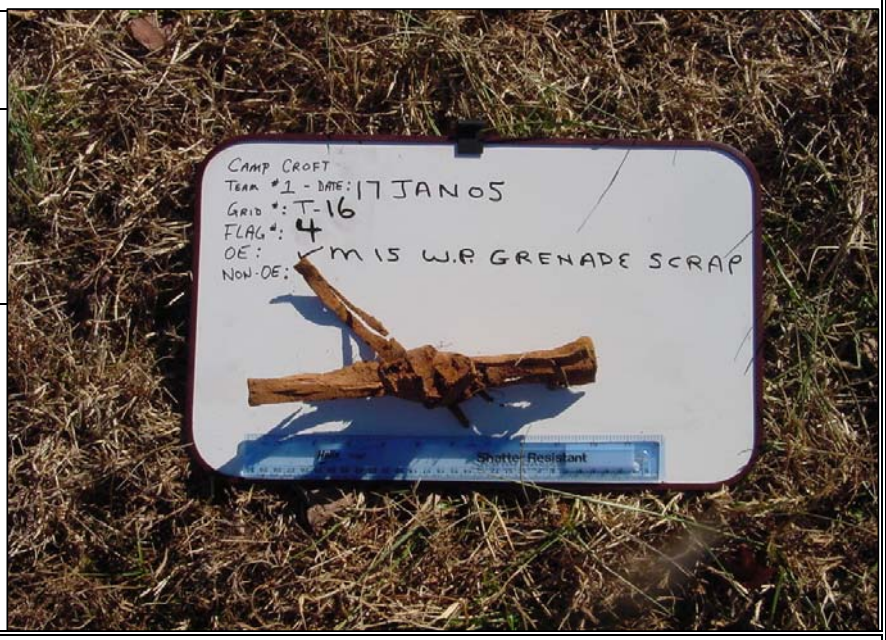
FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA

DATE: Jan. 17, 2005
Photo 13

DIRECTION:

PHOTO BY:
Jeff Schwalm

DESCRIPTION:
OE scrap, M15 grenade - GC2



DATE: January 2005
Photo 14

DIRECTION:

PHOTO BY:
Jeff Schwalm

DESCRIPTION:
Pit #1 M15 WP grenades - Grid 17

FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA

DATE: January 2005
Photo 15

DIRECTION:

PHOTO BY:
Jeff Schwalm

DESCRIPTION:
Pit #2 spoils L16 - Grid 17

DATE: January 2005
Photo 16

DIRECTION:

PHOTO BY:
Jeff Schwalm

DESCRIPTION:
Pit excavation - Grid 17

FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA

DATE: January 2005
Photo 17

DIRECTION:

PHOTO BY:
Jeff Schwalm

DESCRIPTION:
Pit location grid 40

DATE: January 2005
Photo 18

DIRECTION:

PHOTO BY:

DESCRIPTION:
Pit location grid 17

FORMER CAMP CROFT
SPARTANBURG, SOUTH CAROLINA

DATE: January 2005 Photo 19	
DIRECTION: **PHOTO BY:**	
DESCRIPTION: Sweeping data gaps - Grid 35P4	

DATE: Photo	
DIRECTION: **PHOTO BY:**	
DESCRIPTION:	

APPENDIX K
COST SUMMARY

	Contract No.: DACA87-00-D-0034 **Task Order No.: 0014** **Prepared By: ZapataEngineering P.A.**			**Location: Spartanburg, South Carolina** **Project: Former Camp Croft**				
			LABOR HOURS					
SERV CLIN	**LABOR CATEGORY**	**LABOR RATE**	**TASK 10 - INTRUSIVE INVESTIGATION**	**TASK 13 - Environmental Sampling/Chemical analysis**	**TOTAL**	**TASK 10 TOTAL**	**TASK 13 TOTAL**	**TOTAL COST**
0010AN	PROJECT MANAGER	$91.09	93.5	1.25	94.75	$8,516.92	$113.86	$8,630.78
0010BE	WORD PROCESSOR	$38.37	12		12	$460.44	$0.00	$460.44
0010AV	SENIOR UXO SUPERVISOR	$56.99	109		109	$6,211.91	$0.00	$6,211.91
0010AZ	UXO TECHNICAN I @ 0%	$37.22	54		54	$2,009.88	$0.00	$2,009.88
0010AZ	UXO TECHNICAN I @ 4%	$38.71	9		9	$348.39	$0.00	$348.39
0010AZ	UXO TECHNICAN I @ 8%	$40.20	75		75	$3,015.00	$0.00	$3,015.00
0010BA	UXO TECHNICAN II @ 0%	$44.53	170.75		170.75	$7,603.50	$0.00	$7,603.50
0010BA	UXO TECHNICAN II @ 4%	$46.32	18		18	$833.76	$0.00	$833.76
0010BA	UXO TECHNICAN II @ 8%	$48.09	266.25		266.25	$12,803.96	$0.00	$12,803.96
0010BB	UXO TECHNICAN III @ 0%	$51.18	161.75		161.75	$8,278.37	$0.00	$8,278.37
0010BB	UXO TECHNICAN III @ 4%	$53.23	9		9	$479.07	$0.00	$479.07
0010BB	UXO TECHNICAN III @ 8%	$55.28	160.25		160.25	$8,858.62	$0.00	$8,858.62
0010AK	EQUIPMENT OPERATOR	$44.19	78.75		78.75	$3,479.96	$0.00	$3,479.96
0010AK	EQUIPMENT OPERATOR @ 8%	$47.73	85.75		85.75	$4,092.85	$0.00	$4,092.85
0010BF	UXO QUALITY CONTROL SPECIALIST @ 0%	$49.17	56		56	$2,753.52	$0.00	$2,753.52
0010BF	UXO QUALITY CONTROL SPECIALIST @ 4%	$51.14			0	$0.00	$0.00	$0.00
0010BF	UXO QUALITY CONTROL SPECIALIST @ 8%	$53.11	35		35	$1,858.85	$0.00	$1,858.85
0010BG	UXO SAFETY OFFICER @ 0%	$49.17	53		53	$2,606.01	$0.00	$2,606.01
0010BG	UXO SAFETY OFFICER @ 4%	$51.14			0	$0.00	$0.00	$0.00
0010BG	UXO SAFETY OFFICER @ 8%	$53.11	59		59	$3,133.49	$0.00	$3,133.49
	LABOR TOTAL		1506	1.25	1507.25	$77,344.49	$113.86	$77,458.35
	MATERIALS					$42,032.01		$42,032.01
	TRAVEL					$13,155.37		$13,155.37
					SUBTOTAL	$132,531.87	$113.86	
TOTAL COST								**$132,645.73**