APPENDIX G

MEMORANDUM FOR RECORD, SITE VALIDATION PARKER FLATS

PARSONS
Building 4522 - 8th Avenue & Joe Lloyd Way • Ord Military Community, CA 93944

17 November 2005

MEMORANDUM FOR RECORD

A site validation was performed on portions of four 100 x 100-feet grids and a site walk of the remainder of the area that has been subjected to a prior Schonstedt analog removal in the Parker Flats area. This validation process on the four grid portions was performed in the same manner as a Schonstedt removal to depth and was started and completed on the 1st of November. The site validation walk was started on the 1st of November, continued through the 2nd and was completed on the 3rd of November.

The grid area covered was approximately 25% of the area of a standard 100-foot by 100-foot grid. Two of the grids were configured in 50-foot by 50-foot portions and two of the grids were configured in 25-foot by 100-foot portions. The general grid locations, coverage amounts and the configuration of the grids were selected to minimize the amount of vegetation cutting required. These areas were selected by Department of Toxic Substances Control (DTSC)

Results of the grid removal validation process are shown below in Table 1 and results of the site validation walk process are shown below in Table 2.

The grid areas that were investigated as well as the site walk path and anomaly locations are illustrated on the attached map.

Table 1

Grid Removal Validation				
Grid Number	**Cultural Debris (CD) (lbs)**	**Military Munitions Debris (lbs)**	**MEC**	**MD**
C2E6J9	1	0	0	0
C2C8J7	0	1	0	0
C2E9B8	1	1	0	1
C3C1I9	0	0	0	0

The MD item shown found in grid C2E9B8 was an expended Signal, Illumination, Ground, parachute, rifle, M19

Table 2

Site Validation Walk Results				
Id	**Dig result**	**Description**	**Comments**	**Depth**
1	MD	small arms, 30cal	small area of expended brass	8
2	RRD		field latrine slab	0
3	RRD		fighting position	0
4	RRD		fighting position	0
5	CD		can	4
6	CD		wire	1
7	RRD		pile of scrap w/frag pieces	0

Table 2 Continued				
Id	**Dig result**	**Description**	**Comments**	**Depth**
8	CD		pipe	0
9	CD		debris piled at grid stake	0
10	MD		2 empty ammo cans	0
11	CD		wire	1
12	MD		unknown frag	0
13	CD		can	4
14	RRD		packing container signal, illum.	0
15	MD		link	1
16	MD		links	1
17	MD	small arms, 30cal	expended brass	0
18	CD		can	1
19	CD		metal flakes	0
20	CD		wire	1
21	MD		small frag	0
22	MD		small frag	0
23	MD		link	1
24	MD		2 inch frag	0
25	MD		links	2
26	RRD		commo wire	0
27	RRD		commo wire	0
28	RRD		barbed wire	0
29	RRD		scrap metal	2
30	CD		bolt	2
31	CD		can	2
32	MD		3 inch frag	6
33	MD		1 inch frag	1
34	CD		nail	0
35	CD		c-rat can	0
36	CD		nail	4
37	RRD		commo wire	0
38	CD		can	6
39	CD		wire	2
40	CD		light	0
41	CD		sreel bar-14 inches	0
42	RRD		mortar pit	0
43	RRD		wire	0
44	MD-E	grenade, hand, prac, MK II		2
45	RRD		2ft angle iron	1
46	RRD		scrap buckets	0
47	RRD		barbed wire	0
48	CD		metal flakes	3
49	CD		bolt	0
50	MD		frag	1
51	MD		frag	0
52	CD		wire	2
53	MD		frag	0

Table 2 Continued				
Id	**Dig Result**	**Description**	**Comments**	**Depth**
54	CD		barb wire	3
55	CD		barb wire	3
56	CD		nail	3
57	CD		can	0
58	CD		wire	0
59	CD		curly tail	0
60	CD		metals	0
61	MD		expended pyrotechnic debris	0
62	RRD		barb wire	2
63	MD		m1 clip	0
64	MD		m1 clips	0
65	MD		m1 clips	4
66	CD		wire	2
67	RRD		barb wire	1
68	CD		nail	3
69	CD		pin flag/wire	4
70	RRD		barb wire	4
71	RRD		lever safety	2
72	RRD		trip device bracket	0
73	RRD		barb wire	2
74	MD	signal, illum, ground, M125 series		1
75	MD	signal, illum, ground, M125 series		0
76	MD	signal, illum, ground, M125 series		0
77	CD		metals flakes	8
78	CD		nail	8
79	CD		nail	8
80	MD		expended pyrotechnic debris	0
81	MD	small arms, 30cal, blank	and links	5
82	RRD		grenade pin	3
83	CD		trash pile	1

In conclusion, the grid validation process covered approximately 0.23 acres of ground area and produced 1 MD-E item, 2 pounds of MD related scrap and 2 pounds of Cultural Debris (CD).

The site validation walk covered approximately 54,071 linear feet or approximately 6.2 acres (the path width was estimated at 5 feet wide) and produced a total of 83 excavations resulting in one expended (MD-E), grenade, hand, prac, MK II, 25 anomalies consisting of Munitions Debris (MD), 22 anomalies consisting of Range Related Debris (RRD) and 35 anomalies consisting of Cultural Debris (CD).

Any questions regarding this site validation can be addressed by contacting Mike Coon (831) 884-2306.

Regards,

Michael A. Coon
Parsons
UXO QC Manager

Parker Flats
Site Walk Validation
Results
1-3 November 2005

C2E6J9

C2E9B8

C2C8J7

C3C1I9

C2F6A7	C2F6A8	C2F6A9	C2F6A0	C2F7A1
C2E6J7	C2E6J8	**C2E6J9**	C2E6J0	C2E7J1
C2E6I7	C2E6I8	C2E6I9	C2E6I0	C2E7I1

C2D8A6	C2D8A7	C2D8A8	C2D8A9	
C2C8J6	**C2C8J7**	C2C8J8	C2C8J9	
C2C8I6	C2C8I7	C2C8I8	C2C8I9	
C2C8H6	C2C8H7	C2C8H8	C2C8H9	

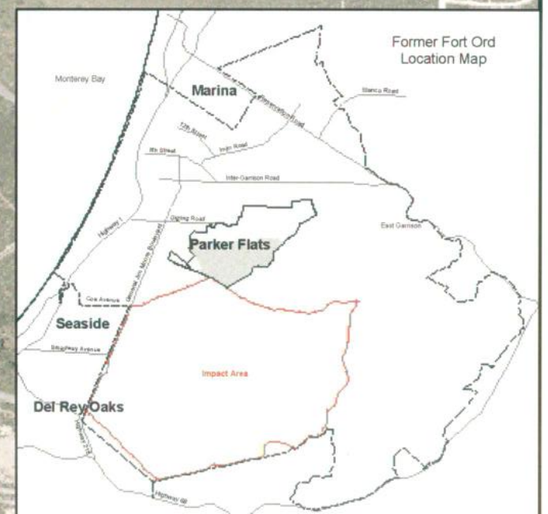
C2E9C6	C2E9C7	C2E9C8	C2E9C9	C2E9C0
C2E9B6	C2E9B7	**C2E9B8**	C2E9B9	C2E9B0
C2E9A6	C2E9A7	C2E9A8	C2E9A9	C2E9A0

C3C1J7	C3C1J8	C3C1J9	C3C1J0	C3C2J1
C3C1I7	C3C1I8	**C3C1I9**	C3C1I0	C3C2I1
C3C1H7	C3C1H8	C3C1H9	C3C1H0	C3C2H1
C3C1G7	C3C1G8	C3C1G9	C3C1G0	C3C2G1

Anomaly Results

- MEC
- Munitions Debris (MD-E, MD-F, MD)
- Iron Oxide/Hot Rocks
- CD
- RRD
- Schonstedt - Path Walked
- Verification Grids
- Areas Subject to Removal
- Parker Flats

Former Fort Ord
Location Map



0 250 500 1,000 1,500 feet

0 50 100 200 300 400 meters

Map Units: NAD 1983 StatePlane California Zone IV (US Feet)

U.S. ARMY CORPS OF ENGINEERS

PARSONS

DESIGNED BY: DRJ	FORMER FORT ORD MONTEREY, CALIFORNIA
DRAWN BY: DRJ	PRINT DATE: Dec 07, 2005 at 17:14 / CONTRACT: DACA05-00-0-0003
CHECKED BY: ARH	AERIAL PHOTOGRAPHY: 2003 6-in Resolution Color / SCALE: 1:8,600
SUBMITTED BY: GWG	SOURCE OF DATA: Fort Ord MMRP Database

APPENDIX G

MEMORANDUM FOR RECORD, SITE VALIDATION PARKER FLATS

Reviewed by: Beth Flynn

MARRS

February 20, 2006
Mr. Jeffrey D. Anderson
EcoMunition Corporation
1209 Broken Spur Way
Plumas Lake, CA 95961

Subject: **PARKER FLATS QA DGM**
FORMER FT. ORD, MONTEREY, CALIFORNIA

INTRODUCTION

This letter report presents the findings of the EM61 time-domain electromagnetics investigation performed by MARRS Services, Inc. (MARRS) at the Parker Flats site located on former Ft. Ord, in Monterey, California. Data acquisition was performed on December 7th, 2005 by MARRS geophysicist Brian W. Hecker and UXO supervisor Charles A. Welk. EcoMunition QA specialist Jeffrey D. Anderson provided logistical support and blind seeding of each grid site. Additional logistical support was provided by Mike Coon of Parsons for field orientation, survey control assistance, and GIS information. Additional oversight was provided by Jim Austreng with the DTSC, Larry Finan with TechLaw (EPA), and Clinton Huckins safety specialist with the US Army Corps of Engineers (USACE).

Under contract to EcoMunition, Inc., MARRS conducted confirmation digital geophysical mapping (DGM) on four grids, approximately 2,500 sq ft each, distributed throughout the Parker Flats site within the Former Fort Ord facility. Figure 1 shows the general location of the Parker Flats site within the Former Fort Ord site boundary as well as the location of the four QA grids investigated within the Parker Flats site. These four grids comprise approximately 0.02% of the total area encompassed by the Parker Flats site.

FIELD PROCEDURES

Time-domain electromagnetic (TDEM) data were obtained within four pre-selected (pre-staked) grids within the Parker Flats area. Prior to beginning the investigation, a standardization line was established near grid C2E6J9. This standardization line was used for the calibration, nulling and latency determination of the DGM system. Background values were checked at each grid and the target-picking threshold for each grid was determined through evaluation of the site specific noise levels and blind seed results after the data acquisition and analysis were completed. The four grids investigated (C2E6J9, C2E9B8, C2C8J7, and C9C1I9) were located within Parker Flats as shown in figure 1. Each of these grids was investigated using 100% coverage techniques with real-time track-line marking and RTK sensor positioning.

EQUIPMENT

The instrumentation selected for this project was the Geonics EM61-MK2 high sensitivity metal detector coupled with the Trimble 5700 RTK positioning system and the InDepth real-time automated track-line

marking system. The EM61-MK2 is a time-domain electromagnetic induction metal detector capable of detecting both ferrous and non-ferrous metals. The Trimble 5700 RTK positioning system is capable of providing centimeter grade accuracy for the location of the sensor coils during data acquisition. Finally, the InDepth real-time track-line marking system was used to provide a visual reference to assure complete track-line data coverage for each grid.

The EM61-MK2 generates a pulsed primary magnetic field that induces eddy currents in nearby metallic objects. When the current is shut off rapidly the decaying magnetic field from metallic objects induces a current in the receiver coils. The induced current is then measured at several specific time intervals (time gates) after the primary field is shut off. The decaying eddy currents can be measured at up to four different time gates (216, 366, 666, and/or 1266 microseconds). Using the two coil geometry the decaying eddy currents can be measured at three earliest time gates for the primary coil and one reading from an offset coil to assist with depth estimation.

The induced eddy currents dissipate rapidly in low conductivity materials (e.g. soils), but induced eddy currents persist for longer periods in high conductivity materials (e.g. metal objects). By making the eddy current measurement a relatively long time after termination of the primary pulse, the response is nearly independent of the conductivity of soil materials. Thus the EM61-MK2 generally produces very clean, noise-free measurements even under varying soil conditions.

DATA ACQUISITION

Generally speaking, data acquisition procedures followed best practices and standards established by the Army Corps of Engineers in DID OE-005-05.01 for a systematic approach for data acquisition and quality control (QC) checks. Equipment QC checks and base station setup were performed as required and recorded in the Geophysical Mapping Field Log. Data for this investigation were acquired using the single-coil differential mode with data obtained at three time-gates. The operational parameters for this investigation were based on the theoretical response of the MPM of a 37mm round. The data were acquired at a rate of 10 readings per second to provide an along line sample density of approximately one reading every 0.6 feet. The lane spacing requirement for this investigation was set to the maximum allowable spacing for the reliable detection of a 37mm round buried 1 foot bgs, resulting in a maximum lane spacing of 4 feet. However in practice the average lane spacing was approximately 2.5 feet, resulting in approximately 0.5 foot of coil overlap along adjacent transects.

Data acquisition procedures for this investigation included equipment inspection, warm-up, and calibration followed by instrument performance static and dynamic tests. After the QC steps were performed and recorded field data acquisition was begun. At the beginning of each grid investigation an additional one-minute static test was performed within the grid to evaluate any site specific noise conditions that may be encountered. These additional static tests proved valuable to determine and document the presence of external noise sources (high voltage electric transmission lines) located various distances from each grid and differing natural settings at each site. After the site specific noise tests were recorded a new line number was assigned to the data set for each grid. Data were acquired using the visual lane-marking system for complete coverage. Prior to completing each grid a final random transect was acquired to act as a repeat profile.

DATA REDUCTION AND INTERPRETATION

Data reduction of the EM61-MK2 data consisted of downloading and positioning the data, followed by evaluating the data quality, applying standard data corrections, presenting the information in a map format, and finally selecting potential UXO like targets for further evaluation. The initial data acquisition and downloading were performed using the Geonics Ltd. computer program EM61MK2A v2.20. The data conversion, positioning, and export for data processing were performed using the Geonics Ltd. computer program DAT61MK2 v1.35. These data were reviewed on site to determine if they had met the required data quality standards for office processing and analysis.

Office data processing and interpretation were performed using Geosoft's Oasis Montaj v6.2 UX-Detect and UX-Process modules for the QC evaluation, processing and interpretation. The QC data evaluation includes static and reference item response, determination and application of the system latency correction, and application of the appropriate drift correction. Next the data were evaluated to ensure adequate data coverage was maintained and no data gaps were observed throughout each investigation area. Statistical analysis of the field data was performed to establish the instrument and site noise levels for realistic determination of the target selection threshold. The average standard deviation of the instrument response for the four grids investigated was approximately 1.4 mV. Using the standard threshold criteria of 1.5 times the standard deviation of the noise resulted in a selection criterion of 2.2 mV. After all corrections were applied to the data they were gridded using conservative grid dimensions to enable detection of the MPM's while reducing the inclusion of potential clutter items. After the data were gridded and targets were selected the results were compared to the location of the blind seeds. The response values of the anomalies at the seed locations were determined and used as a basis for further evaluation of the selected targets.

RESULTS

The results of the DGM investigation are presented on Figures 2 through 5. The results are summarized below in Table 1 providing the noise level summary, the seed type and response, and the number of targets selected. After the data were processed and the targets selected, EcoMunitions provided MARRS with the location and description of the seed items placed in each grid. The seed locations were then compared with the selected targets to determine if the seed items had been identified. All seed item were detected using the 2.2 mV selection threshold applied to these data sets. The seed item response was then used as the evaluation criteria to be used for all other selected targets. In general, the results of the DGM investigation appear to indicate that fourteen potential MEC targets remain within the four grids investigated. Six of these targets have responses above the average response for the seed items placed in the grid. These targets represent potential MEC items similar to or larger than the 37mm stimulant used as QC seeds in this investigation. The remaining eight targets have responses between 1.5 times the noise level and the average response of the seed items placed in the grid. Although these targets may represent MEC items they are interpreted as the response from targets either smaller or deeper than the seed items used for this investigation.

Grid C2E6J9

Grid C2E6J9 results are displayed in Figure 2 and explained below. This grid is characterized as a generally flat grid with a small north-south oriented drainage feature located on the western third of the site. Noise

evaluation at this grid indicated a standard deviation of 0.02 mV for the static test and a standard deviation of 0.73 mV during data acquisition, as shown on Table 1, indicating that the response of items with mass and geometry similar to a 37mm projectile will be readily detectable at the depth of the QC seed item within this grid. Evaluation of the data obtained within this grid resulted in the selection of the one seed item and three additional targets, as shown in Table 2. Based on the instrument response one of these targets represents a potential MEC item similar to or larger than the emplaced seed if at the same depth and the remaining two targets appear to be either smaller or more deeply buried items.

Grid C2E9B8

Grid C2E6J9 results are displayed in Figure 3 and explained below. This grid is characterized as a flat grid with a series of high voltage power transmission lines located east of the grid. Noise evaluation at this grid indicated a standard deviation of 0.48 mV for the static test and a standard deviation of 1.90 mV during data acquisition, as shown on Table 1, indicating that the response of items with mass and geometry similar to a 37mm projectile will be readily detectable at the depth of the QC seed item within this grid. Evaluation of the data obtained within this grid resulted in the selection of the one seed item and three additional targets, as shown in Table 2. Based on the instrument response all three of these targets represent potential MEC items similar to or larger than the emplaced seed if at the same depth.

Grid C2C8J7

Grid C2C8J7 results are displayed in Figure 4 and explained below. This grid is characterized as a generally flat grid with a rutted east-northeast trending road and a series of northeast trending high voltage power transmission lines directly over the southeast half of the grid. The combination of these features created a significant increase in the geophysical noise at this location. Noise evaluation at this grid indicated a standard deviation of 1.89 mV for the static test and a standard deviation of 2.35 mV during data acquisition, as shown on Table 1, indicating that the response of items with mass and geometry similar to a 37mm projectile will be readily detectable at the depth of the QC seed item within this grid. Evaluation of the data obtained within this grid resulted in the selection of the one seed item and eight additional targets, as shown in Table 2. Based on the instrument response two of these targets represent potential MEC items similar to or larger than the emplaced seed if at the same depth and the remaining six targets appear to be either smaller or more deeply buried items.

Grid C2C1I9

Grid C2C1I9 results are displayed in Figure 5 and explained below. This grid slopes significantly from east to west across the grid. This grid is characterized as a previously burned area without prior brush removal. Numerous stumps and charred plant remains were present across this site. Additionally, numerous holes also resulted in challenging data acquisition terrain at this location. Noise evaluation at this grid indicated a standard deviation of 0.09 mV for the static test and a standard deviation of 0.78 mV during data acquisition, as shown on Table 1, indicating that the response of items with mass and geometry similar to a 37mm projectile will be readily detectable at the depth of the QC seed item within this grid. Evaluation of the data obtained within this grid resulted in the selection of only target the one seed item, as shown in Table 2. No additional targets representing potential MEC items were located within this grid.

Table 1. Summary of Results

Grid	Background Level standard deviation in millivolts	Seed Type (stimulant)	Seed Response in millivolts	Total Targets Detected (response greater than 1.5 times average standard deviation) (includes seeds)
C2E6J9	0.73	37mm	4.8	4
C2E9B8	1.90	37mm	4.7	4
C2C8J7	2.35	37mm	6.2	9
C9C1I9	0.78	37mm	4.8	1
Average	1.44	na	4.8	5.1

Table 2. List of Targets

Area	Target ID#	California Zone 4 - US Survey Feet		Instrument	Item Description
		Predicted Location		Response	
		Northing	Easting	mV	
C2C1I9	C2C1I9-1	2124816.00	5746324.50	4.8	37mm Simulant Seed
C2E6J9	C2E6J9-1	2126908.50	5741308.50	11.3	Nail
C2E6J9	C2E6J9-2	2126923.50	5741322.00	4.8	37mm Simulant Seed
C2E6J9	C2E6J9-3	2126910.00	5741335.50	3.7	Soda pull-tab
C2E6J9	C2E6J9-4	2126932.50	5741311.50	2.7	7.62mm casing
C2C8J7	C2C8J7-1	2124939.00	5743195.50	8.7	Shotgun base wad
C2C8J7	C2C8J7-2	2124936.00	5743179.00	6.2	37mm Simulant Seed
C2C8J7	C2C8J7-3	2124924.00	5743204.50	5.2	5.56mm casing
C2C8J7	C2C8J7-4	2124907.50	5743194.00	3.5	5.56mm casing
C2C8J7	C2C8J7-5	2124906.00	5743186.50	3.3	Shotgun base wad
C2C8J7	C2C8J7-6	2124909.00	5743204.50	3.0	5.56mm casing
C2C8J7	C2C8J7-7	2124928.50	5743186.50	3.0	7.62mm casing
C2C8J7	C2C8J7-8	2124919.50	5743183.50	2.4	7.62mm casing
C2C8J7	C2C8J7-9	2124909.00	5743170.00	2.4	5.56mm casing
C2E9B8	C2E9B8-1	2126139.00	5744220.00	33.7	7.62mm casing
C2E9B8	C2E9B8-2	2126187.00	5744224.50	8.0	5.56mm casing
C2E9B8	C2E9B8-3	2126101.50	5744212.50	4.9	.45 cartridge
C2E9B8	C2E9B8-4	2126181.00	5744211.00	4.7	37mm Simulant Seed

CONCLUSIONS

In general, the results of the DGM investigation identified fourteen targets at the four grid locations. Of these targets six are characterized by instrument responses similar to or larger than the seed item response and represent the greatest potential of a MEC or MEC like item. The eight remaining targets are characterized by instrument responses between the 2.2 mV noise threshold and the average seed item response and may represent smaller or more deeply buried items. All targets identified during this investigation warrant further intrusive investigation to determine the source of the anomalous response.

Limited reacquisition and intrusive investigations were performed by Jeffrey D. Anderson in early January 12, 2006. Reacquisition positioning was performed with a 1 foot (30 cm) grade Thales differential GPS system, and sensor aided detection was performed with a Garrett GTI2500 all metal detector. A 5-foot area around each anomaly was investigated. Intrusive investigations were limited to a depth of 12 inches below ground surface. The QA specialist indicated encountering significant interference during reacquisition from the overhead power lines at grids C2E9B8 and C2C8J7. With these factors in mind at least four of the items recovered (C2E6J9-3, C2C8J7-1, C2E9B8-1, and C2E9B8-3) do not appear to have the amount of mass required to create an anomaly of that magnitude from the size and depth of the item recovered. This suggests that the actual item may be located deeper than the original limits of the investigation. Additionally, those items located in the grids adjacent to the power lines may not have been detected during reacquisition due to the significant interference.

STANDARD OF CARE AND WARRANTY

The scope of MARRS' services consists of applying the above geophysical methods to describe the subsurface condition. It is recognized that the effectiveness and accuracy of the geophysical methods employed by MARRS is subject to the limitations imposed by surface and subsurface conditions at the projects site. The services performed by MARRS are conducted using best-practice in a manner consistent with that level of skill ordinarily exercised by members of the profession currently employing similar methods. MARRS makes no other warranty, with respect to the performances of services or products described in this proposal, expressed or implied.

MARRS appreciates the opportunity to provide our services to EcoMunition, Inc. for this investigation. If you have any questions, please call the undersigned at (707) 888-6605.

Respectfully,
MARRS Services, Inc.

Brian Hecker

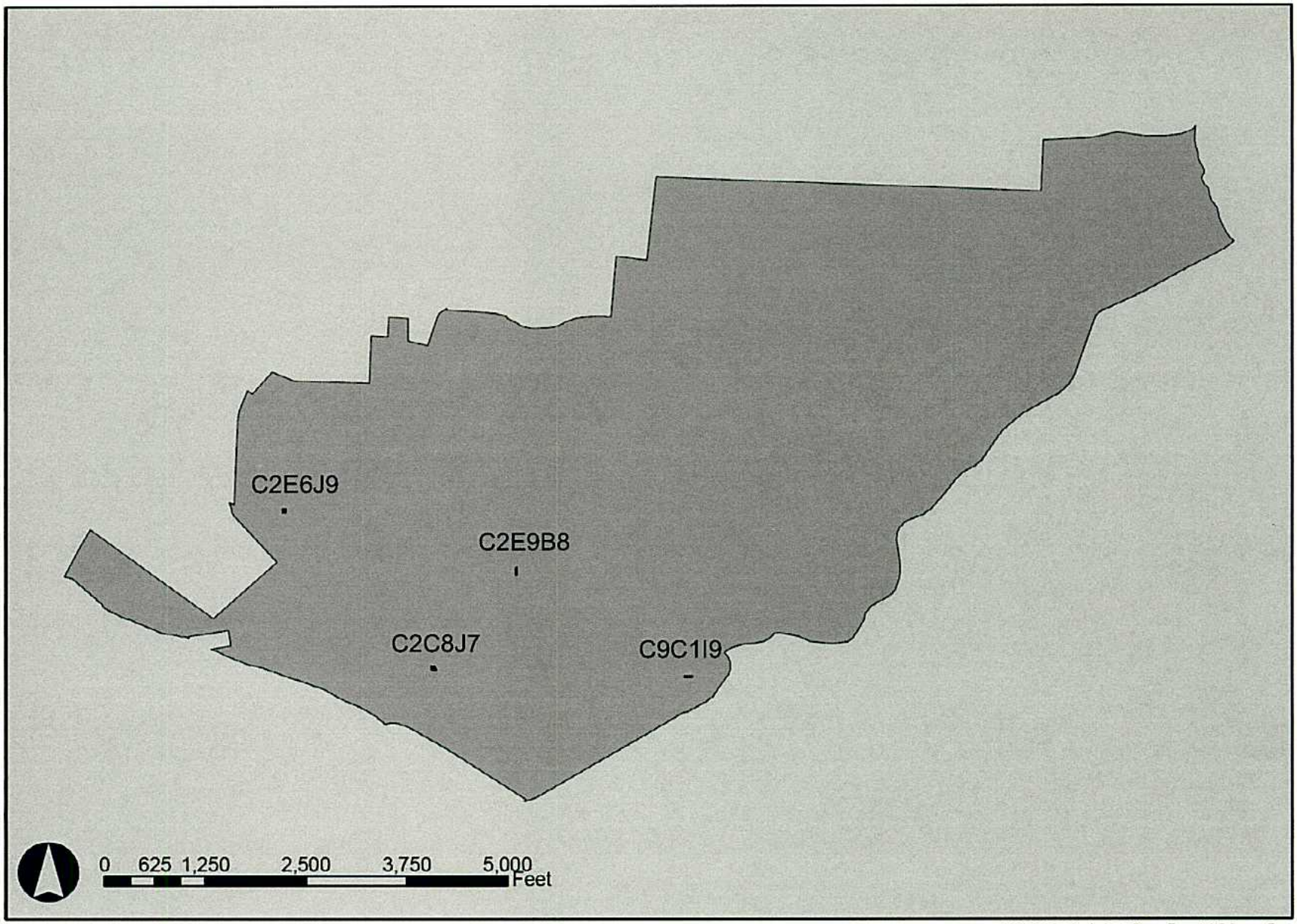
Brian W. Hecker
Senior Geophysicist, G.P. 991

Enclosures: Figures 1 through 5 and Electronic Geophysical Data Package (Raw Data, Field Logs, Processed Data, and Target list)

Former Fort Ord - Parker Flats - QA DGM
Grid Location Map
Figure 1

v1 01/04/06

MARRS

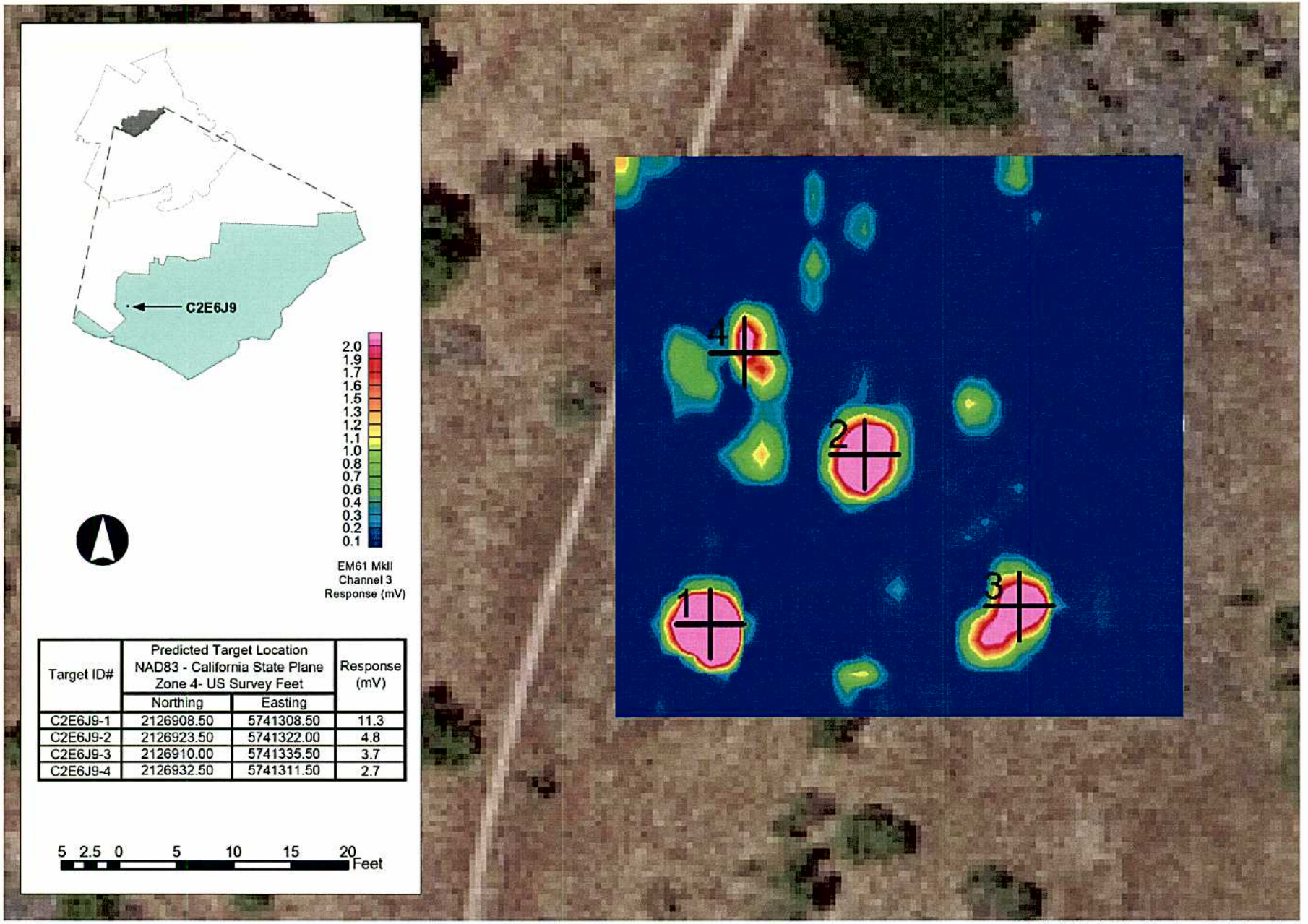


NAD 83, California State Plane, Zone 4, US Survey Feet

Former Fort Ord - Parker Flats - QA DGM
DGM Results Grid C2E6J9
Figure 2

v1 01/04/06

MARRS



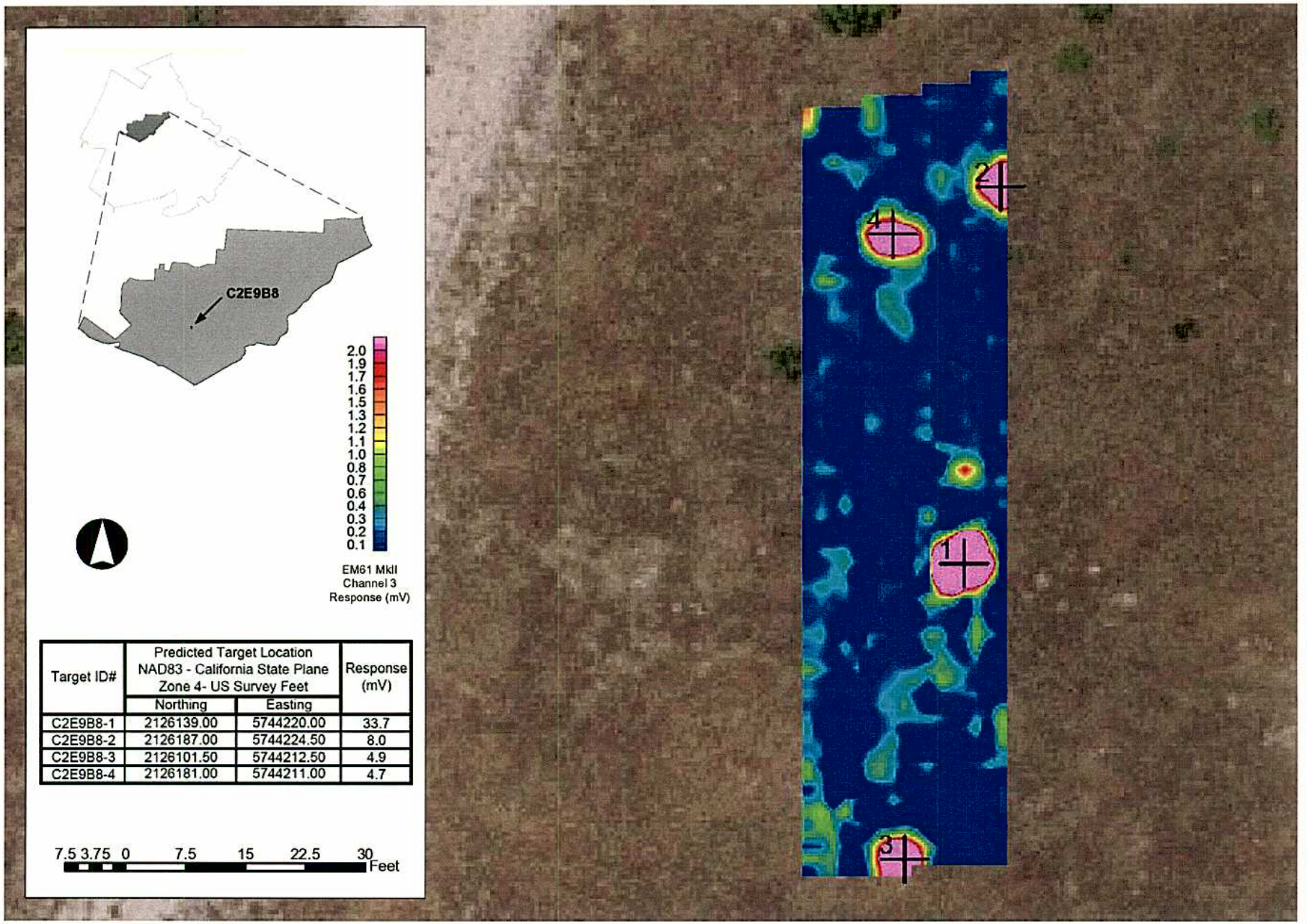
Target ID#	Predicted Target Location NAD83 - California State Plane Zone 4- US Survey Feet		Response (mV)
	Northing	Easting	
C2E6J9-1	2126908.50	5741308.50	11.3
C2E6J9-2	2126923.50	5741322.00	4.8
C2E6J9-3	2126910.00	5741335.50	3.7
C2E6J9-4	2126932.50	5741311.50	2.7

NAD 83, California State Plane, Zone 4, US Survey Feet

Former Fort Ord - Parker Flats - QA DGM
DGM Results Grid C2E9B8
Figure 3

v1 01/04/06

MARRS



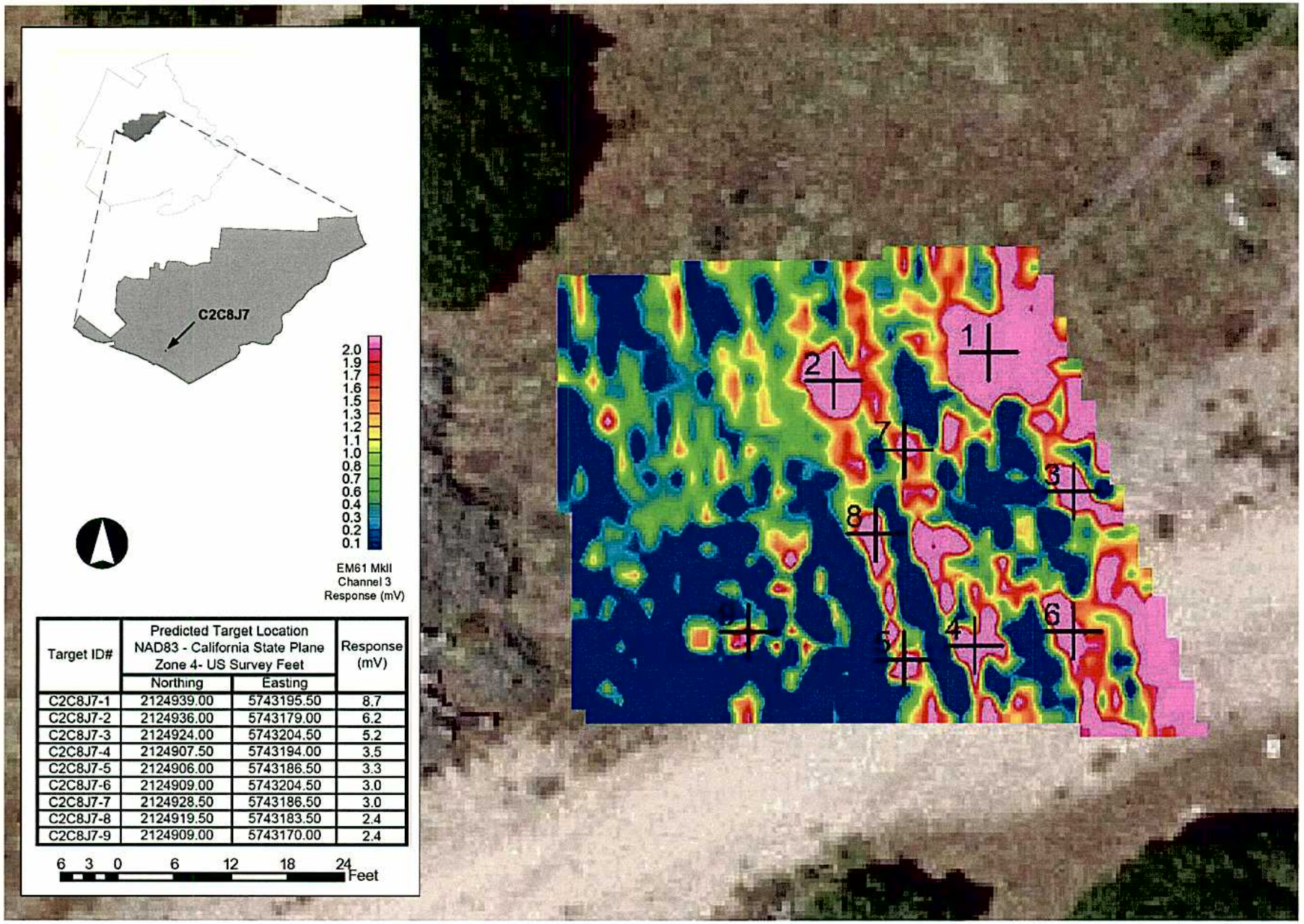
Target ID#	Predicted Target Location NAD83 - California State Plane Zone 4- US Survey Feet		Response (mV)
	Northing	Easting	
C2E9B8-1	2126139.00	5744220.00	33.7
C2E9B8-2	2126187.00	5744224.50	8.0
C2E9B8-3	2126101.50	5744212.50	4.9
C2E9B8-4	2126181.00	5744211.00	4.7

NAD 83, California State Plane, Zone 4, US Survey Feet

Former Fort Ord - Parker Flats - QA DGM
DGM Results Grid C2C8J7
Figure 4

v1 01/04/06

MARRS



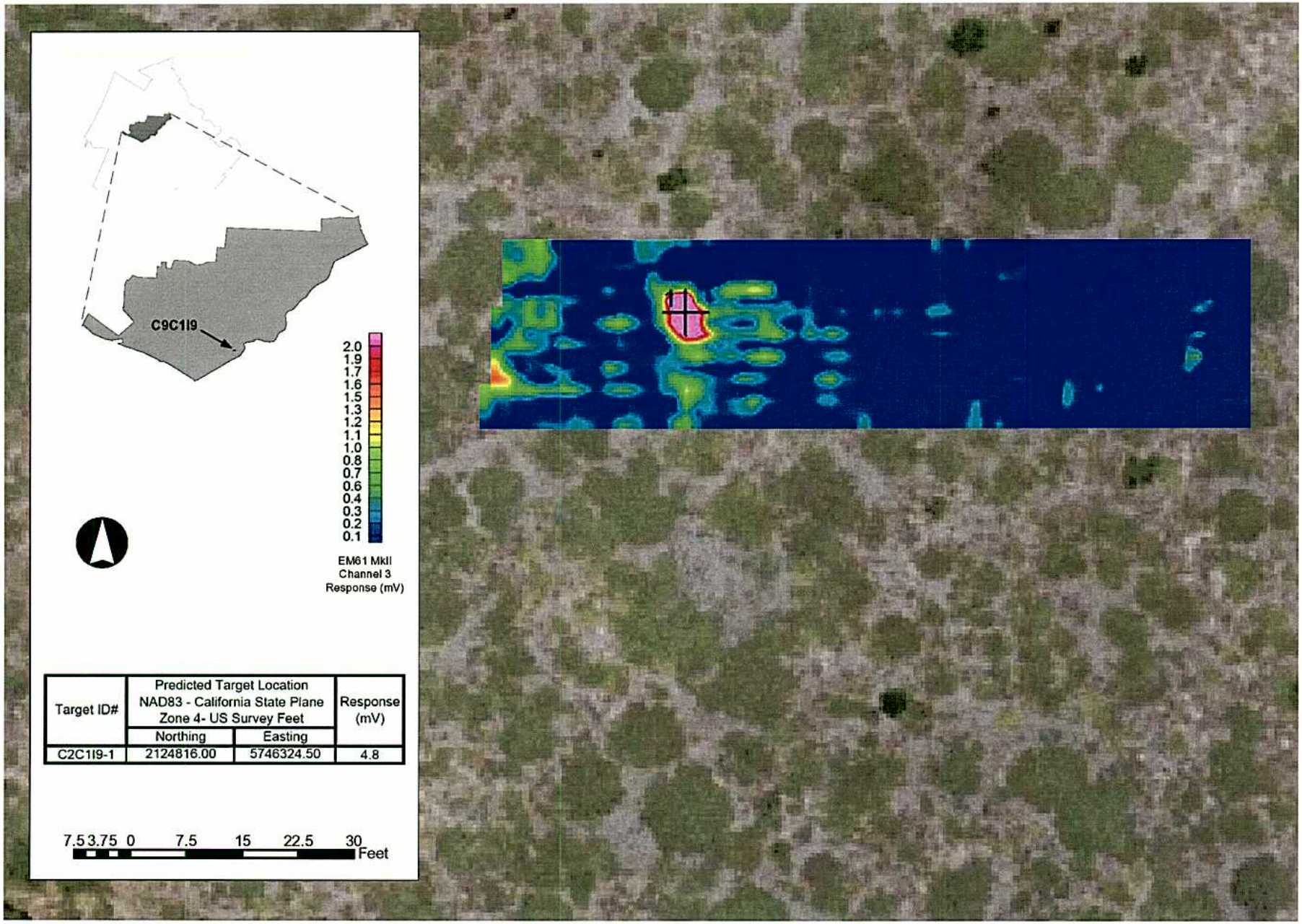
Target ID#	Predicted Target Location NAD83 - California State Plane Zone 4- US Survey Feet		Response (mV)
	Northing	Easting	
C2C8J7-1	2124939.00	5743195.50	8.7
C2C8J7-2	2124936.00	5743179.00	6.2
C2C8J7-3	2124924.00	5743204.50	5.2
C2C8J7-4	2124907.50	5743194.00	3.5
C2C8J7-5	2124906.00	5743186.50	3.3
C2C8J7-6	2124909.00	5743204.50	3.0
C2C8J7-7	2124928.50	5743186.50	3.0
C2C8J7-8	2124919.50	5743183.50	2.4
C2C8J7-9	2124909.00	5743170.00	2.4

NAD 83, California State Plane, Zone 4, US Survey Feet

Former Fort Ord - Parker Flats - QA DGM
DGM Results Grid C2C1I9
Figure 5

v1 01/04/06

MARRS



Target ID#	Predicted Target Location NAD83 - California State Plane Zone 4- US Survey Feet		Response (mV)
	Northing	Easting	
C2C1I9-1	2124816.00	5746324.50	4.8

NAD 83, California State Plane, Zone 4, US Survey Feet

MARRS Geophysical Mapping Field Log v3.3

Survey Parameters	GPS	Dead Rec	Proc
EM61 Mode:	Auto ✓		
Wheel Inc:	N/A ✓		
Readings:	10 ✓		
Surv Line:	70		
Line Incr:	1 ✓		
Sequence:	One Way ✓		
Direction:	North ✓		
Start Stn:	0 ✓		
Stn Incr:	Positive ✓		
Units:	Feet ✓		

Project:	Ft. Ord QA Mapping
Date:	12/7/05
Operator (s):	BGH / CAW
Equipment:	EM61 Mk2 Single Coil
SN: Top=	0422
Bottom=	0422
EM61=	05230
Allegro=	
5700=	022024045D
Survey Mode:	Man - portable RTK-referenced
Setup:	Coil Height (cm) 39 Antenna Height (cm) 137
Geo File Name:	B1287A
GPS QC File Name:	
Log Type:	QC Field Data Collection QA Mapping
Type of Collection:	100% Coverage
Standard Response:	2160 1489 874 727
Calibration Point Coordinates	2126843.036 5741278.668

Time	Line #	Operation	Procedures	Acceptance Criteria	Results/Notes
0911	N/A	Power On	Turn on units, note time, warm up for ~ 30 minutes	Stable Readings	
0911	N/A	Conditions	Record Weather Conditions	N/A	Temp 55° Conditions High Clouds
1213	N/A	Survey Setup	Verify settings with SurveyParameters above	Go/ No Go	Go
—	N/A	Time Sync	Sync EM-61 Clock with GPS Clock	+/- 0.1 seconds	
1214	N/A	Main Battery Voltage	Record voltage	Should be greater than 12 V	Voltage Unit 1: 12.6 Voltage Unit 2:
Post	N/A	Positioning Check	Verify GPS coordinates at reference point	+/- 0.3 ft or +/-0.004 sec	Latitude/Northing: 2126843.3 Longitude/Easting: 5741278.9
1213	N/A	Personnel Test	Check personnel for change, watches, cel phones, etc.	+/- 2 mV	
1215	Ø	Cable Shake Test	After null, shake cables while watching #s	No cats spikes	
1215	1	Static Test 1	Log over reference point (no reference item) for 3 min	+/- 2.5 mV	CH1: 1.1 CH2: 0.5 CH3: 0.2 CH4: 0.9
1219	2	Reference Test 1	Log over reference item for 1 minute	+/- 10% of reference standard	CH1: 2160 CH2: 1488 CH3: 875 CH4: 727
1221	3	Static Test 2	Log over reference point (no reference item) for 1 min	+/- 2.5 mV	CH1: 1.6 CH2: 0.8 CH3: 0.3 CH4: 1.3
1222	LN #	Latency Check	With Reference Item Speed OP up, OP dn, Fast up, Slow dn	Line numbers each line →	OP Up: 4 OP Dn: 5 Slow: 6 Fast: 7
Below	LN #	Mini Validation	Without Reference Item change line #'s on each pass	Line numbers each line →	OP Up: 8 OP Dn: 9
1230	Last Data in Comments	**Collect Field Data**	**Log field data at Op speed**	**N/A, Field Collection Only, For additional survey lines, use comments**	
See Below		Static Test 3	Log over reference point (no reference item) for 3 min	+/- 2.5 mV	See 2nd Page
/	/	Reference Test 2	Log over reference item for 1 minute	+/- 10% of reference standard	
/	/	Static Test 4	Log over reference point (no reference item) for 1 min	+/- 2.5 mV	
/	N/A	Main Battery Voltage	Record voltage	Should be greater than 11.00 V	Voltage Unit 1: 12.45 Voltage Unit 2:
/	N/A	Time Sync	Check Time Sync (EM-61 Clock with GPS Clock)	+/- 0.1 seconds	Keeping Time Offset (tenths of seconds):
/	N/A	Conditions	Record Weather Conditions	N/A	Temp 65° Conditions High Clouds

Comments:

1230	10	C2E6J9 UXO3 Data Acquisition (use Line 3 as Local Noise Evaluation)
1311	11	C2E9B8 UXO3 Local Noise evaluation static test (near Power lines)
1317	12	C2E9B8 UXO3 Data Acquisition.
—	—	Note inadvertant termination of Logging program during transport to next grid. Return to test strip Calibration point to start next file.

MARRS Geophysical Mapping Field Log v3.3

Survey Parameters	GPS	Dead Rec	Proc
EM61 Mode:	Auto ✓	—	
Wheel Inc:	N/A ✓	—	
Readings:	10 ✓	—	
Surv Line:	10	—	
Line Incr:	1 ✓	—	
Sequence:	One Way ✓	—	
Direction:	North ✓	—	
Start Stn:	0 ✓	—	
Stn Incr:	Positive ✓	—	
Units:	Feet ✓	—	

Project: Ft. Ord QA Mapping | Date: 12/7/05 | Operator (s): CAW / BWH

Equipment: EM61 Mk2 Single Coil | SN: Top= 0422, Bottom= 0422, EM61= 052302 Allegro= , 5700= 022024045D

Survey Mode: Man - portable RTK-referenced

Setup: Coil Height (cm) 39 | Antenna Height (cm) 137

Geo File Name: C1207B | GPS QC File Name:

Log Type: QC Field Data Collection QA Mapping

Type of Collection: 100% Coverage

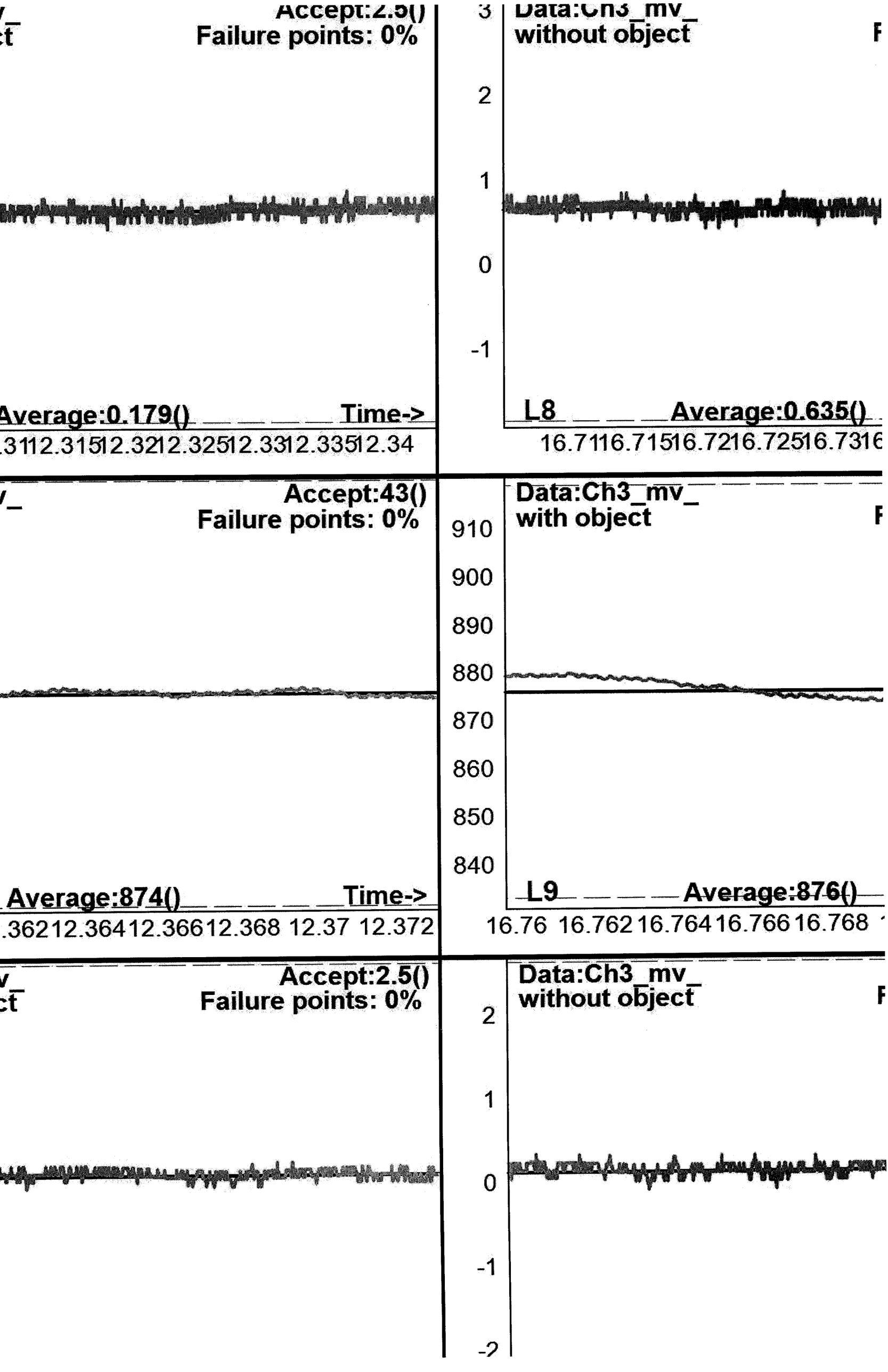
Standard Response: 2163 | 1489 | 874 | 727

Calibration Point Coordinates: 2126843.036 | 5741278.668

Time	Line #	Operation	Procedures	Acceptance Criteria	Results/Notes
0911	N/A	Power On	Turn on units, note time, warm up for ~ 30 minutes	Stable Readings	
1400	N/A	Conditions	Record Weather Conditions	N/A	Temp 65° Sky/Cloud Cover: High Clouds
1400	N/A	Survey Setup	Verify settings with SurveyParameters above	Go/ No Go	Go
—	N/A	Time Sync	Sync EM-61 Clock with GPS Clock	+/- 0.1 seconds	
1404	N/A	Main Battery Voltage	Record voltage	Should be greater than 12 V	Voltage Line 1: 12.45
Post	N/A	Positioning Check	Verify GPS coordinates at reference point	+/- 0.3 ft or -/-0.004 sec	Easting: 2126843.2 Northing: 5741279.0
1405	N/A	Personnel Test	Check personnel for change, watches, cel phones, etc.	+/- 2 mV	
1405	0	Cable Shake Test	After null, shake cables while watching #s	No data spikes	Ch1: 0.2 Ch2: 0.1 Ch3: 0.0 Ch4: 0.2
1406	1	Static Test 1	Log over reference point (no reference item) for 3 min	+/- 2.5 mV	Ch1: 2149 Ch2: 1482 Ch3: 871 Ch4: 724
1409	2	Reference Test 1	Log over reference item for 1 minute	+/- 10% of reference standard	Ch1: 6.5 Ch2: 0.1 Ch3: 0.1 Ch4: 0.2
1410	3	Static Test 2	Log over reference point (no reference item) for 1 min	+/- 2.5 mV	
NA	LN #	Latency Check	With Reference Item Speed OP up, OP dn, Fast up, Slow dn	Line numbers each line →	Beg: n/a mins at day
NA	LN #	Mini Validation	Without Reference Item change line #'s on each pass	Line numbers each line →	UP List: — DN List: — UP Beg: 0 DN Beg: UP Mid: DN Mid:
1427	Use Survey Comments	Collect Field Data	Log field data at Op speed	N/A, Field Collection Only, For additional survey lines, use comments	
1740	8	Static Test 3	Log over reference point (no reference item) for 3 min	+/- 2.5 mV	Ch1: -9.8 Ch2: -0.8 Ch3: 0.6 Ch4: 2.2
1743	9	Reference Test 2	Log over reference item for 1 minute	+/- 10% of reference standard	Ch1: 2150 Ch2: 1489 Ch3: 876 Ch4: 729
1745	10	Static Test 4	Log over reference point (no reference item) for 1 min	+/- 2.5 mV	Ch1: -10 Ch2: -1.8 Ch3: 0.1 Ch4: 0.8
1750	N/A	Main Battery Voltage	Record voltage	Should be greater than 11.00 V	Voltage Line 1: 11.85
—	N/A	Time Sync	Check Time Sync (EM-61 Clock with GPS Clock)	+/- 0.1 seconds	Record Time Offset (partial sec if applicable): —
1750	N/A	Conditions	Record Weather Conditions	N/A	Temp 65° Conditions: Clouds.

Comments:

1427	4	C2C8J7 Local Noise Evaluation static test (below high voltage power lines)
1429	5	C2C8J7 Data Acquisition
	6	C3C1I9 Local Noise Evaluation static test (Burned hill side)
	7	C3C1I9 Data Acquisition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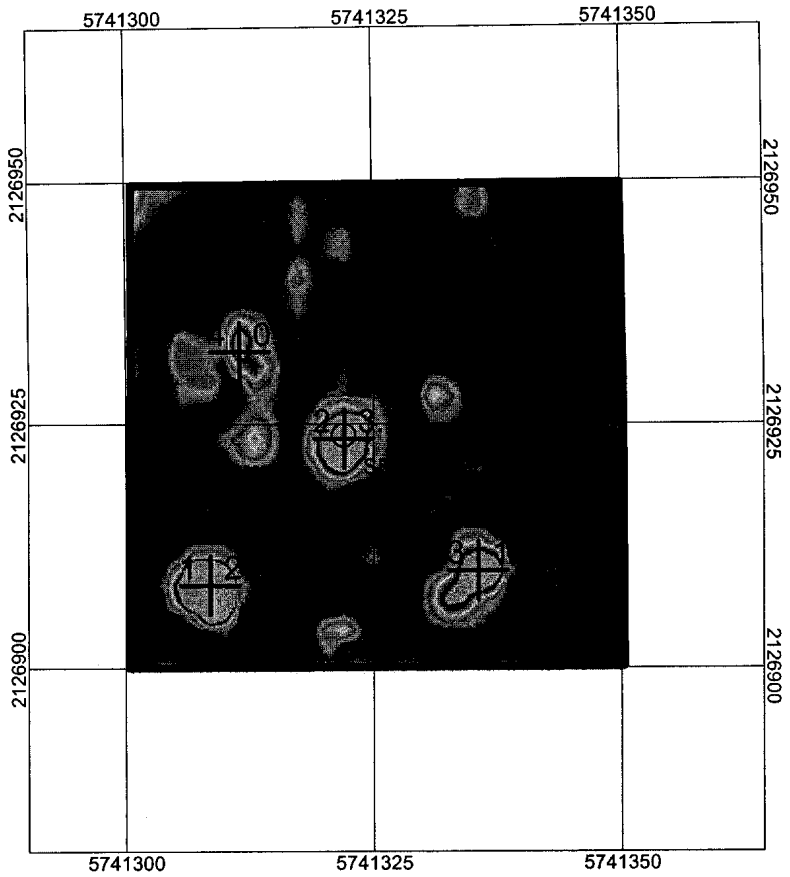
Failure points: 0%
Data:Ch3_mv_
without object
3
2
1
0
-1
Average:0.179()
Time->
12.31512.3212.32512.3312.33512.34
L8
Average:0.635()
16.7116.71516.7216.72516.731
Accept:43()
Failure points: 0%
Data:Ch3_mv_
with object
910
900
890
880
870
860
850
840
Average:874()
Time->
12.36412.36612.368 12.37 12.372
L9
Average:876()
16.76 16.762 16.764 16.766 16.768
Accept:2.5()
Failure points: 0%
Data:Ch3_mv_
without object
2
1
0
-1
-2



2.0
1.9
1.7
1.6
1.5
1.3
1.2
1.1
1.0
0.8
0.7
0.6
0.4
0.3
0.2
0.1

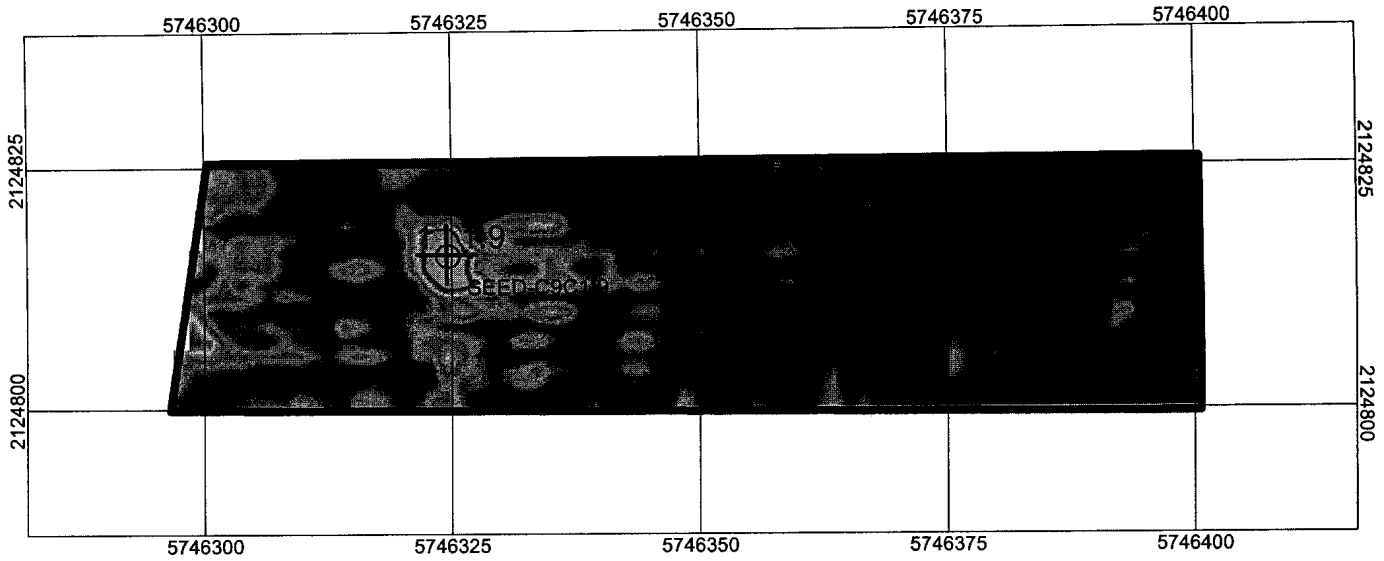
Ch_3 Response
in millivolts

Target ID | Target depth (ft)

10 0 10 20
US survey foot
NAD83 / California CS83 zone 4

GRID C2E6J9 EM61 RESULTS
Ft. Ord Parker Flats QA Survey
Monterey, California

N



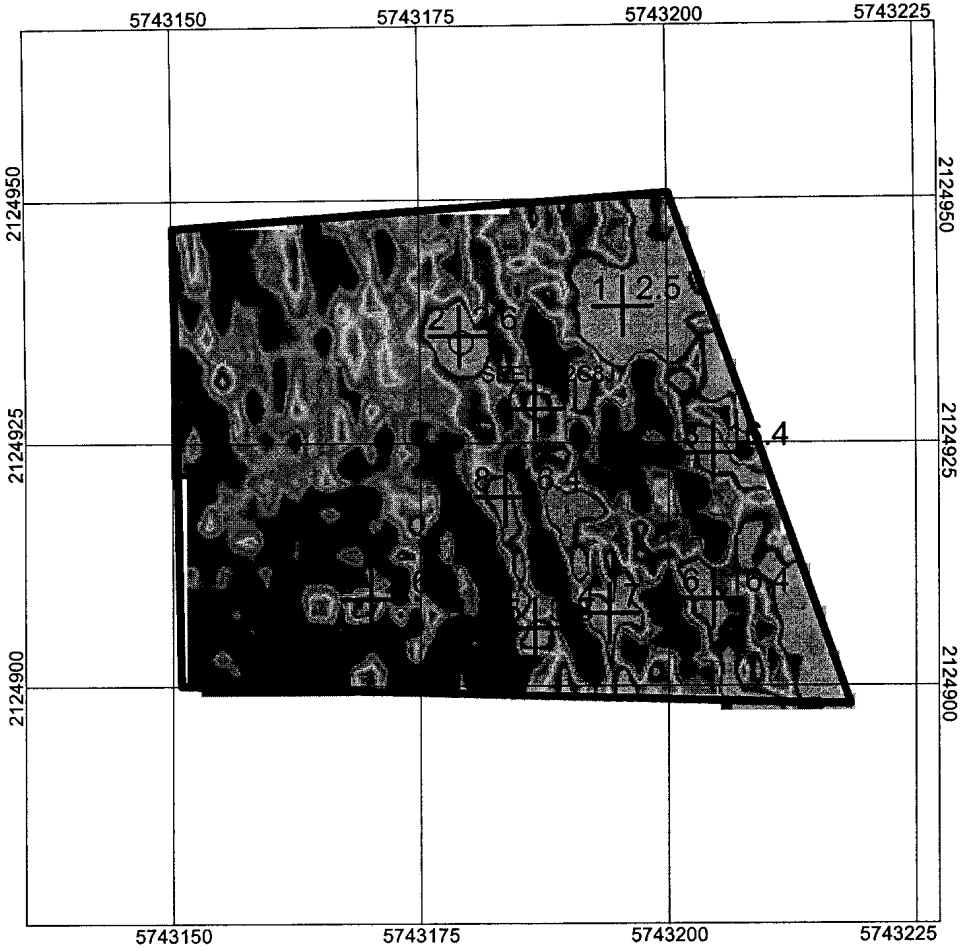
2.0
1.9
1.7
1.6
1.5
1.3
1.2
1.1
1.0
0.8
0.7
0.6
0.4
0.3
0.2
0.1

Ch_3 Response
in millivolts

Target ID | Target depth (ft)

10 0 10 20
US survey foot
NAD83 / California CS83 zone 4

GRID C2C1I9 EM61 RESULTS
Ft. Ord Parker Flats QA Survey
Monterey, California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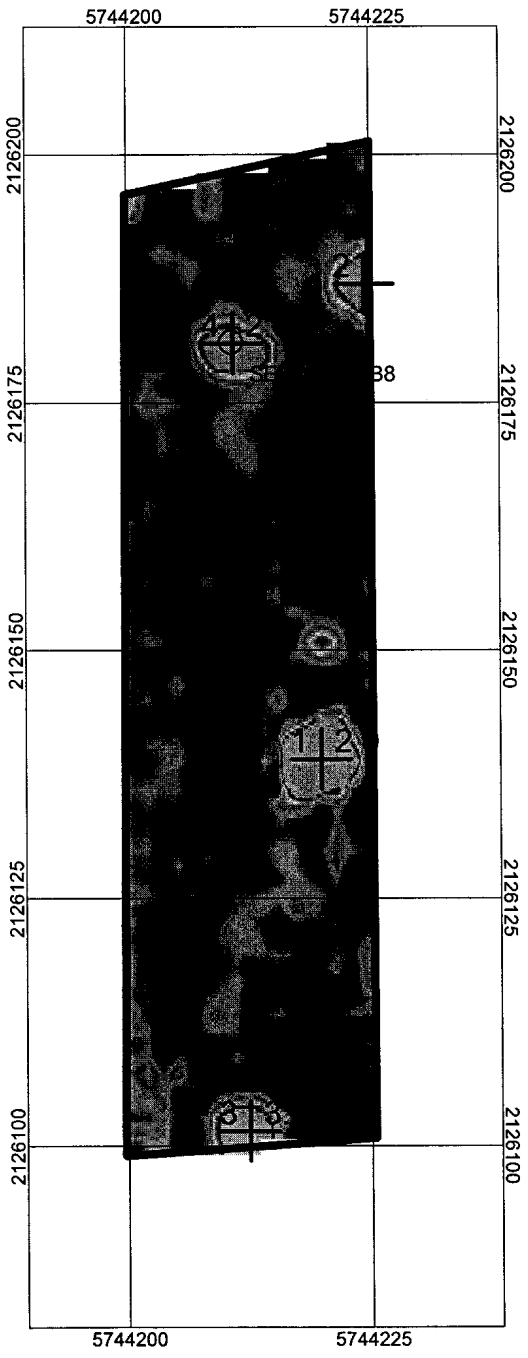
5743225
2124950
2124925
2124900
2.0
1.9
1.7
1.6
1.5
1.3
1.2
1.1
1.0
0.8
0.7
0.6
0.4
0.3
0.2
0.1
Ch_3 Response
in millivolts
Target ID | Target depth (ft)
10 0 10 20
US survey foot
NAD83 / California CS83 zone 4
GRID C2C8J7 EM61 RESULTS
Ft. Ord Parker Flats QA Survey
Monterey, California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5744225
2126200
2126175
2126150
2126125
2126100
2.0
1.9
1.7
1.6
1.5
1.3
1.2
1.1
1.0
0.8
0.7
0.6
0.4
0.3
0.2
0.1
Ch_3 Response
in millivolts
Target ID | Target depth (ft)
10 0 10 20
US survey foot
NAD83 / California CS83 zone 4
GRID C2E9B8 EM61 RESULTS
Ft. Ord Parker Flats QA Survey
Monterey, California
N