Attachment K-1

Geophysical Investigation of Bayo Canyon
Los Alamos National Laboratory, Los Alamos, New Mexico
prepared by ARM Geophysics
(on CD included with this document)

Geophysical Investigation of BAYO CANYON Los Alamos National Laboratory, Los Alamos, New Mexico

ARM Project No.: 07254

TERRANEARPMC Project No.: 085000

TERRANEARPMC Contract No.: 52236-001-07-6H

November 15, 2007

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EXECUTIVE SUMMARY

ARM Geophysics (a division of ARM Group Inc.) performed a non-intrusive geophysical investigation using the TM-5emu instrument at Bayo Canyon from July 19th through August 14th, 2007. The primary objective of the investigation was to collect, process, and interpret TM-5emu (EMU) digital geophysics data co-located with a Real-Time Kinematic (RTK) Differential Global Positioning System (DGPS) to delineate the lateral extent anomalies that can be attributed to subsurface metallic content and thus infer shrapnel distribution.

The results from the geophysical techniques used are straight-forward. In order to meet the primary objective, the electromagnetic unit (EMU) response data were interpreted both qualitatively and quantitatively. Qualitatively, electromagnetic unit (EMU) metal detection data shows anomaly distribution ranging from high anomaly densities in the central-to-southwest central portion of the site radiating to lower anomaly densities outwards in all directions, particularly in the northwest, southeast, and eastern portions of the site. This is consistent with the expected pattern from the known physical parabolic trajectory of material from central source test explosions. Quantitatively, the EMU data interpretation resulted in 39,199 peak anomaly selections, which equates to an average anomaly density of approximately 1000 per acre.

The interpretations infer two important conclusions: (1) the shrapnel distribution is captured by the current survey boundary as indicated by the site map and (2) the shrapnel is primarily within the first foot of the surface as indicated by the lack of distribution near roads or other areas of potential surface movement or washout.

Since project objectives were completed for the Bayo Canyon site, future soil, metallic debris, or shrapnel sampling or removal can commence by avoiding or searching for the identified areas depending on whether the future project scope is to safely work around or remediate potential subsurface hazards.

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1.0 INTRODUCTION AND SCOPE

ARM Geophysics (a division of ARM Group Inc.) performed a non-intrusive geophysical investigation using the TM-5emu instrument at Technical Area (TA) - 10 Los Alamos National Laboratory (LANL), Bayo Canyon from July 19th through August 14th, 2007. The primary objective of the investigation was to collect, process, and interpret TM-5emu (EMU) digital geophysics data co-located with a Global Positioning System (GPS) in order to delineate the lateral extent anomalies that are likely attributed to subsurface metallic content and inferred shrapnel distribution from Consolidated Unit (CU) 10-001(a)-99, a former firing site within TA-10 at Bayo Canyon. .

This report details the methods of the investigation in Section 2, a discussion of the results in Section 3, and conclusions in Section 4.

2.0 METHODOLOGY

2.1. GEODETIC POSITIONING

All geophysical instruments were integrated with a centimeter-grade differential global positioning system (DGPS) to: allow real-time navigation along planned survey routes, provide accurate location of geophysical measurements, provide the means of establishing a local reference grid system (as needed), and allow direct data integration with LANL's geographic information system (GIS). The DGPS system of preference for the current survey was the Ashtech Z-extreme (base and rover) units. The geographic positions were acquired at 1-second intervals to allow for adequate spatial sampling relative to walking speed. All geographic data are presented in New Mexico State Plane Coordinate System, Central Zone, North American Datum 1983, US survey feet.

2.2. ELECTROMAGNETIC UNIT METAL DETECTOR (GAP TM-5EMU)

The TM-5emu System consists of a Norand 602 computer, a Minelab F1B2 Electro-magnetic (EM) Sensor Module, two 18" Sensor Coils, and a EMUDAS program and various ancillary devices. The TM-5emu system is a combination of both analogue and digital electronics to process the information into a form that allows simplified operations, including an automatic procedure for "ground balancing" out the effects of adverse geologic conditions. The basic function of the Norand system is to acquire digital data from the Sensor Module and present it in a form that allows the operator to achieve certain objectives through a combination of graphic display, audio tone mapped to target response, and digital signal processing. The Norand system has an in-built procedure that provides automatic discrimination between buried metal objects and natural geologic material with a high magnetic susceptibility, such as basalt and ironstone. Examples of the TM-5emu utilization and discrimination uses range from the Waikaloa to the Camp Navajo geophysical prove outs (GPO's) where the resulting TM-5emu detection / discrimination capability was shown to be superior to a EM61 instrument, particularly pertaining to smaller items such as shrapnel (See Appendix A for example images from the Waikalao GPO). The TM-5emu response is measured in electromagnetic units (EMUs) and all data were digitally recorded in the field for subsequent processing on computer. Lastly, as shown by the images in Appendix A, the ability to detect smaller items, such as shrapnel, in a variety of geologic settings, is specifically why the EMU was selected for the current work at TA-10, Bayo Canyon.

3.0 RESULTS AND DISCUSSION

3.1. GEODETIC (GPS AND DGPS) SURVEY

GPS and DGPS data were integrated with each of the sensor system results to: allow real-time navigation along planned survey routes; provide accurate location of geophysical measurements; provide the means of establishing a local reference grid system (as needed); and allow direct data integration with LANL's geographic information system (GIS). As part of the geophysical survey, a geodetic grid system was established (guided by a template provided by TerranearPMC) and large-scale features (such as an ephemeral stream channel and brush reduction outline) were also surveyed as reference. A site map, displaying the established grid system with large-scale features outlined, is provided as **Figure 1**.

3.2. ELECTROMAGNETIC (GAP TM-5EMU DETECTOR) SURVEY

EMU data were collected and processed to determine two main points of interest: (1) the site-wide distribution of shrapnel and (2) delineate any trends or anomalies in the shrapnel detected on site. The main focus of the EMU survey was completed through combining the data onto one composite map, shown in **Figure 2**.

In order to meet the main objective, the electromagnetic unit (EMU) response data were interpreted for anomalous responses in the data both qualitatively and quantitatively. Qualitatively, the EMU metal detection data shows anomaly distribution (**see Figure 2**) ranging from high anomaly densities in the central-to-southwest central portion of the site, radiating to lower anomaly densities outwards in all directions. Anomalous densities are particularly pronounced in the northwest, southeast, and eastern portions of the site. Quantitatively, the EMU data interpretation resulted in 39,199 peak anomaly selections, which equates to an average anomaly density of approximately 1000 per acre. Individual daily quality control summary and grid-based map images are provided in Appendices B and C, respectively, for additional details.

In addition, areas that have low counts (green in color) that are interspersed with higher count areas (red in color) are probably former roads or tracks, or small ephemeral channels and gullies, where shrapnel is either not present because of lack of deposit, surface movement during heavy precipitation events, or removal by human intervention or a combination of the above. Note also the wide green area that cuts diagonal from south to north though survey area. This is a former channel / low area that because of lack of erosion control and maintenance since the 1960's, which has resulted in altered surface flow patterns, began to fill in. This is confirmed from aerial photographs and ground observations. Thus, any remaining shrapnel that has not washed out previously has subsequently been covered with recent deposition.

Also noteworthy is the density distribution about the former shot pads as points of origin for the shrapnel. Most obvious is the density distribution about the eastern shot pad with a ring of higher density, which decreases with distance, centered about a smaller area of less density, as would be inferred with a shot pad that was periodical cleaned and scraped and with the known physical parabolic trajectory of material from central source test explosions. This is less obvious in the western shot pad but can still be inferred. Course site-wide density color-coded map is shown as **Figure 3** that further demonstrate these trends.

Thus, ARM's interpretation infers two important conclusions: (1) the shrapnel distribution is adequately defined by the current survey boundary as indicated by the site map and (2) the shrapnel is primarily within the first few inches of the surface as indicated by the lack of distribution near roads or other areas of potential washout. Practical knowledge and experience supports the near surface inferences, as smaller items do not penetrate the subsurface as deep as larger items, particularly within a compacted and well-vegetated ground surface.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Each technique used in this investigation measures different physical properties of the subsurface. The main objective for the project was to determine the distribution for all shrapnel in order to assess the ordnance related hazards .

The main objective was achieved by mapping the area using the TM-5emu instrument until the potential shrapnel anomaly distribution dropped off significantly from the central location of the former firing site pads. Currently, the only potential hazard on site is shrapnel and other metallic debris that are currently hypothesized to be imbedded within the first few inches to 1 foot from the surface.

ARM recommends that future soil, metallic debris, or shrapnel sampling or removal can commence by either avoiding or searching for the identified areas (using a one-meter buffer from the provided geodetic target lists) tabulated from the interpretation of the EMU data provided. Avoidance or searching for these anomalous areas of interest is entirely dependent on whether the future scope is to safely work around or directly remediate potential subsurface hazards.

Since this data may be used to locate exploratory borings near potentially hazardous materials, it is important to recognize that geophysical methods are indirect techniques. Although the investigation work scope included standard and/or routinely accepted practices of the geophysical industry, no subsurface survey can completely define subsurface conditions due to a variety of factors including, but not limited to, the distance (lateral plus vertical) from the sensor to a metallic item of interest. Thus, ARM cannot accept responsibility for inherent technique limitations, survey limitations, or unforeseen site-specific conditions. Lastly, the correlation of geophysical responses with probable subsurface features is based on inferences made from the physical properties of buried materials; these physical properties are usually not definitive in terms of identification of the material and some ambiguities may exist.

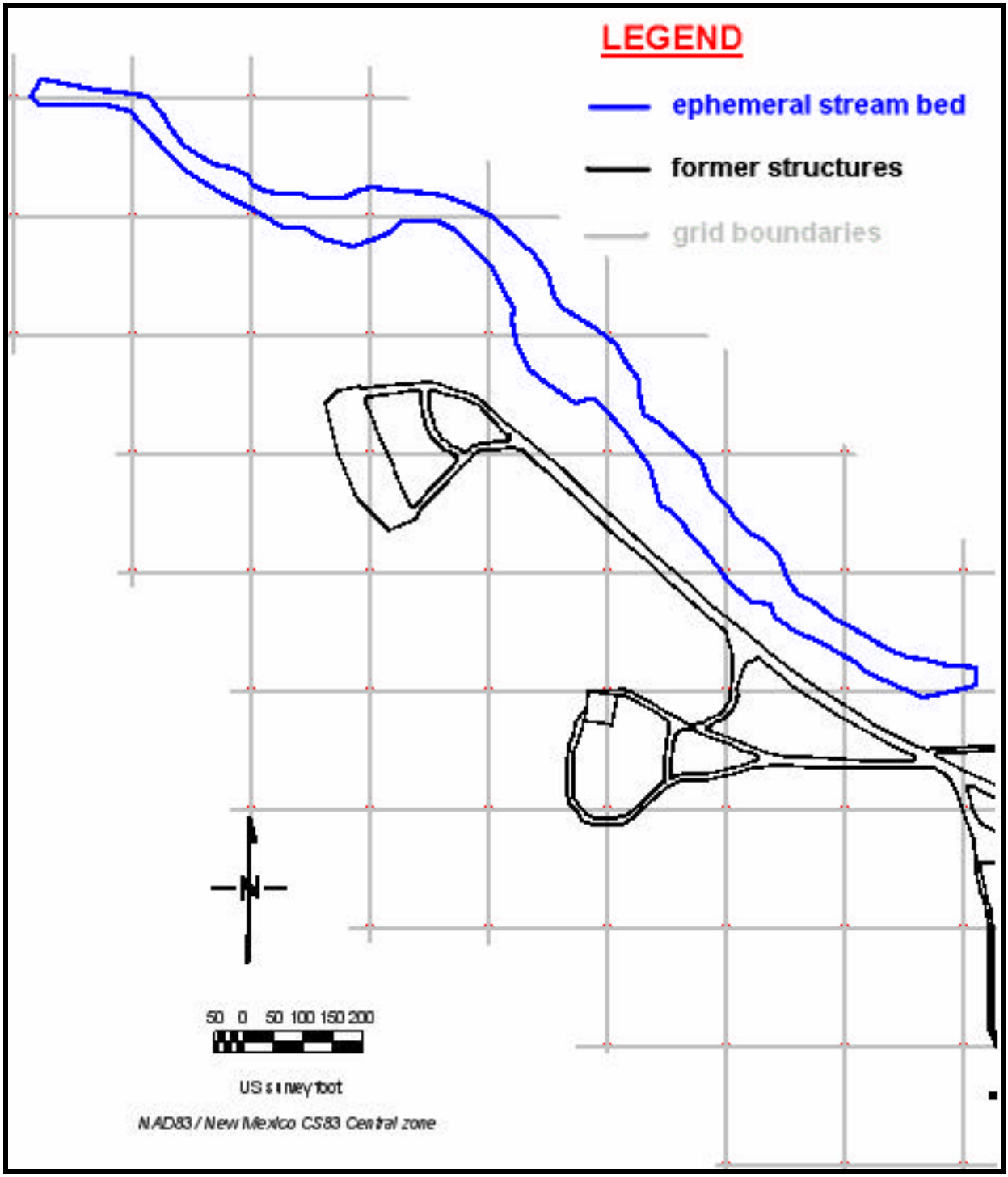


Figure 1. Site Map displaying the established grid system (gray-lined boxes with red corners), the former building structures (in light black), and an ephemeral stream channel (in thick blue).

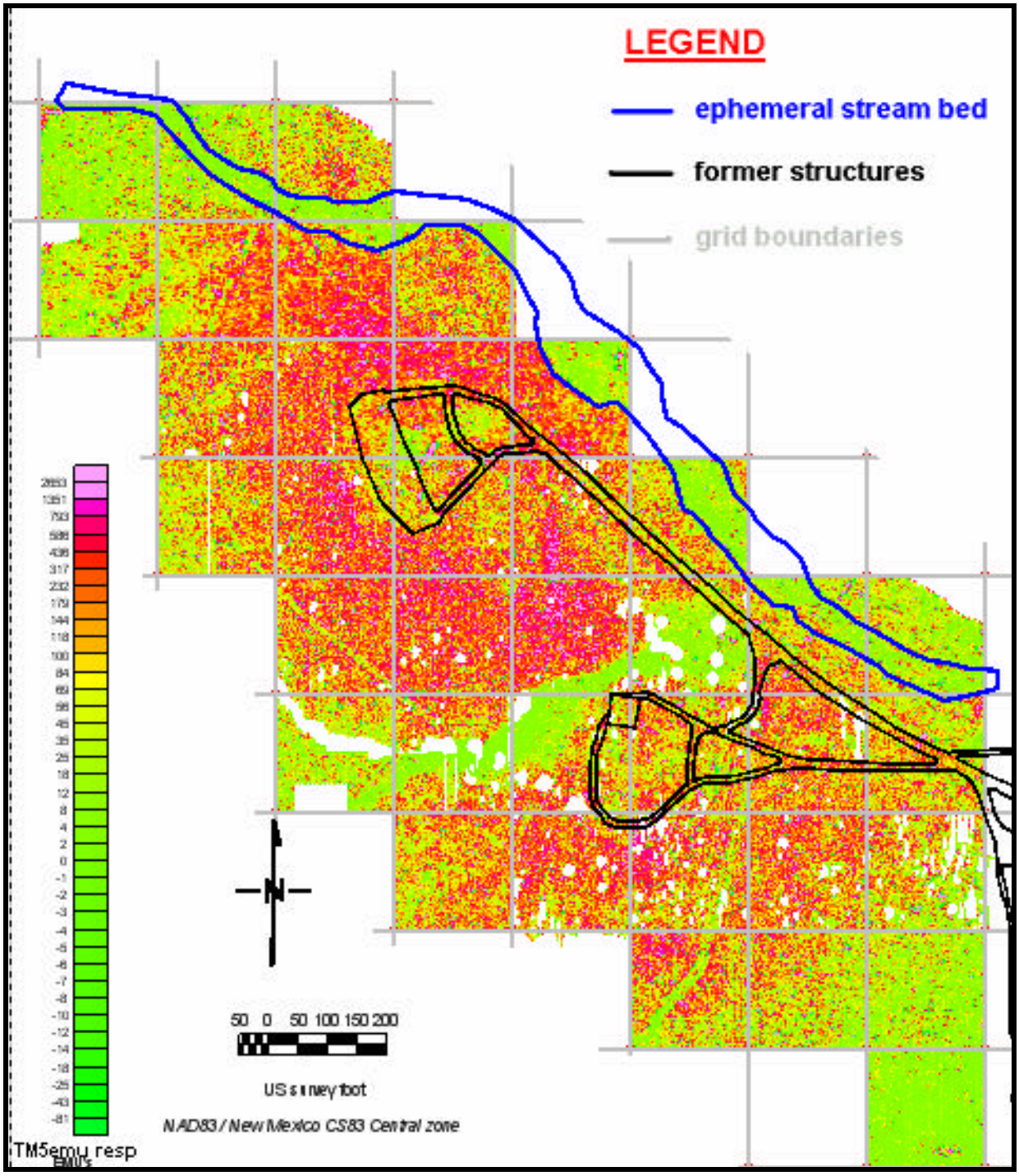


Figure 2. Site Map displaying the composite of EMU data collection with the established grid system (gray lines with red corners), overlain on the former building structures (in light black) and the ephemeral stream channel (in thick blue). Red color indicates high response values (shrapnel) while green color indicates low response values ("background" or lack of shrapnel).

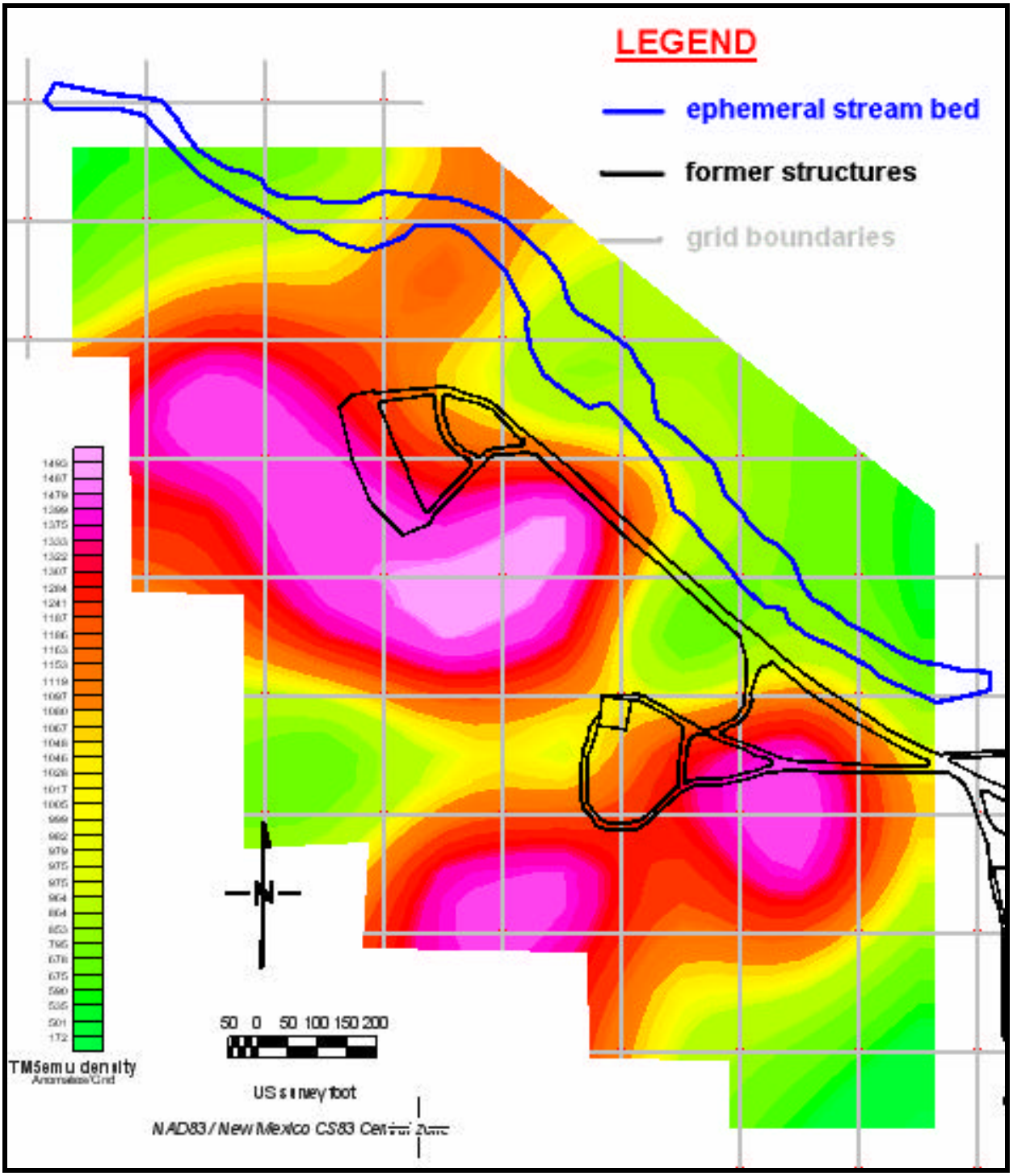


Figure 3. Site Map displaying the composite of EMU data collection with the established grid system (gray lines with red corners), overlain on the former building structures (in light black) and the ephemeral stream channel (in thick blue). Red color indicates higher densities of anomalies (shrapnel cluttering) while green color indicates lower densities of anomalies (lower level or lack of shrapnel cluttering).

APPENDIX A. EXAMPLE GEOPHYSICAL PROVE-OUT (GPO) IMAGES FOR EM61 AND TM-5EMU WITHIN HOT SOILS AT THE WAIKALOA SITE

An example data set from the Waikaloa Geophysical Prove-Out which demonstrates the ability of the TM-5emu to discriminate out effects from localized soil conditions and significantly reduce false positive detections due to such phenomenon:

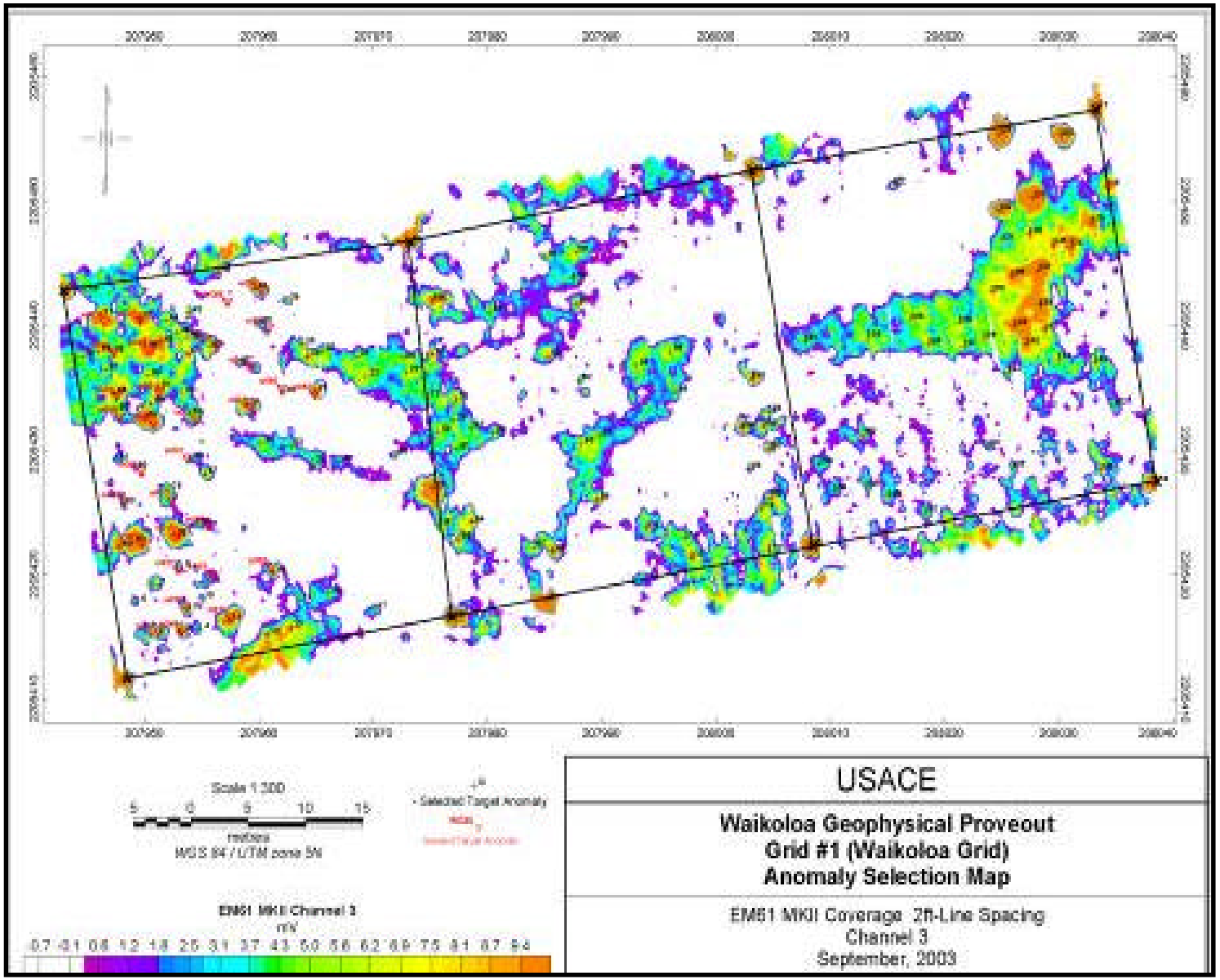


Figure A1. Example EM61 data set from the Waikaloa Geophysical Prove-Out in Hawaii.

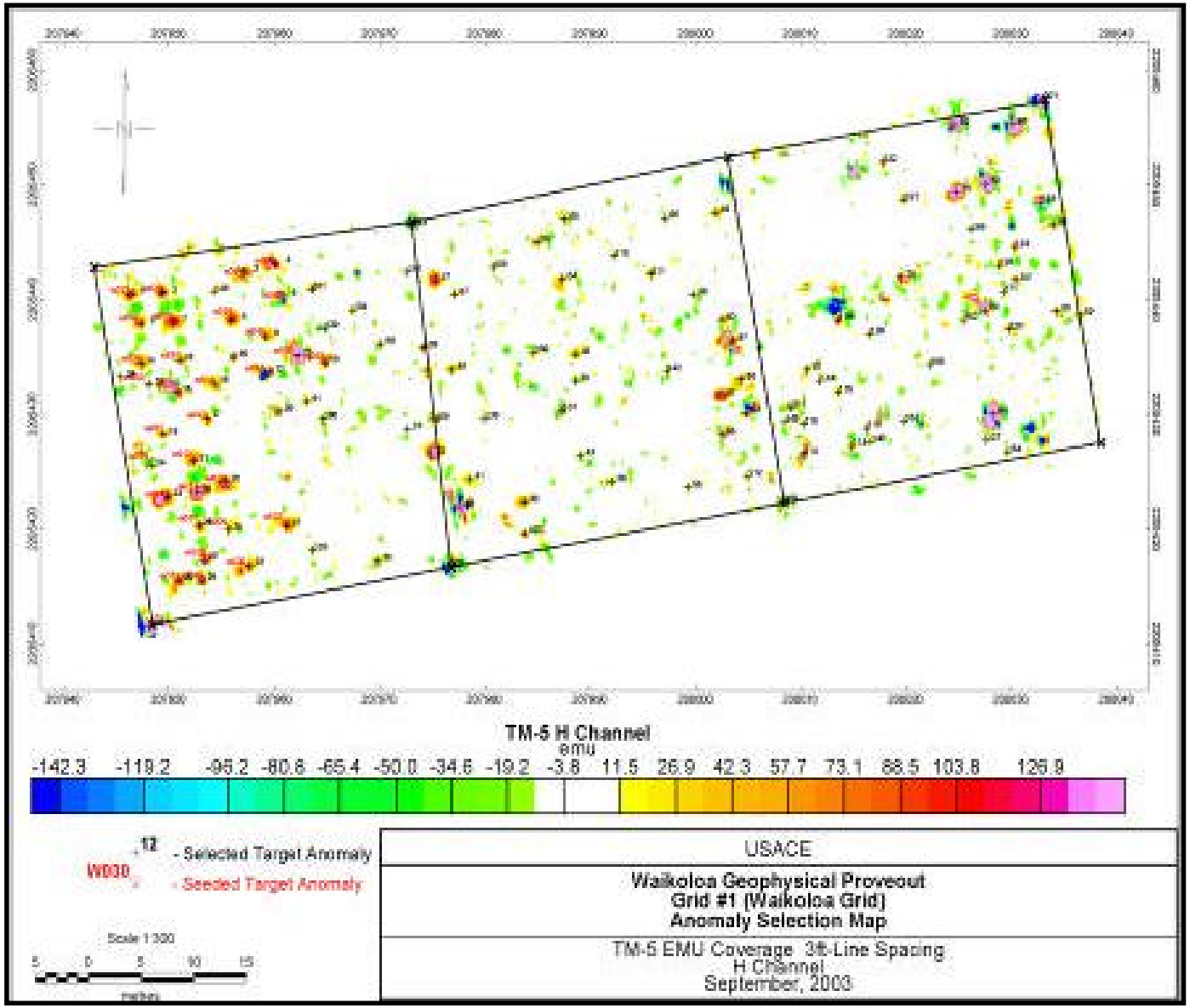
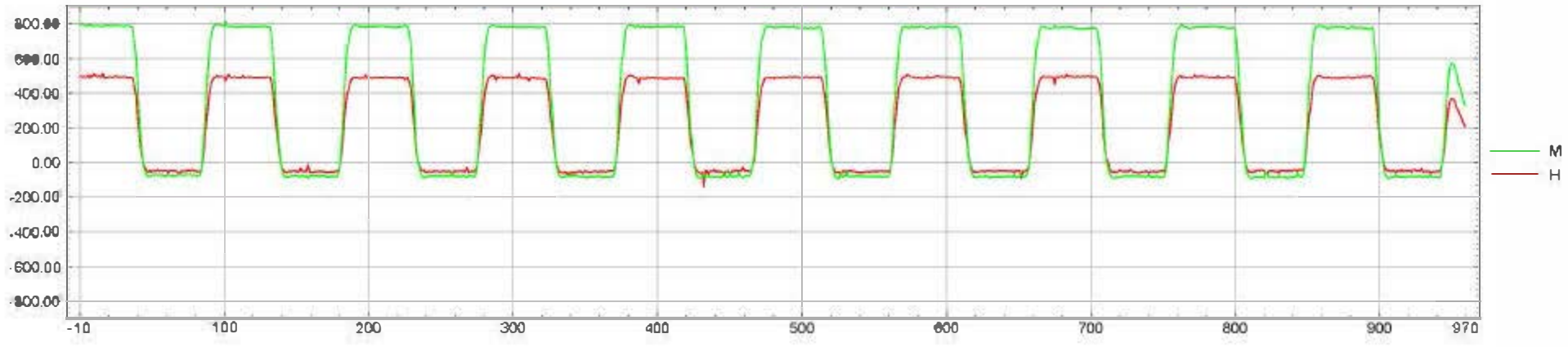


Figure A2. Example TM5-EMU data set from the Waikaloa Geophysical Prove-Out in Hawaii.

APPENDIX B. DAILY QUALITY CONTROL / CALIBRATION IMAGES FOR THE TM5EMU DATA COLLECTION

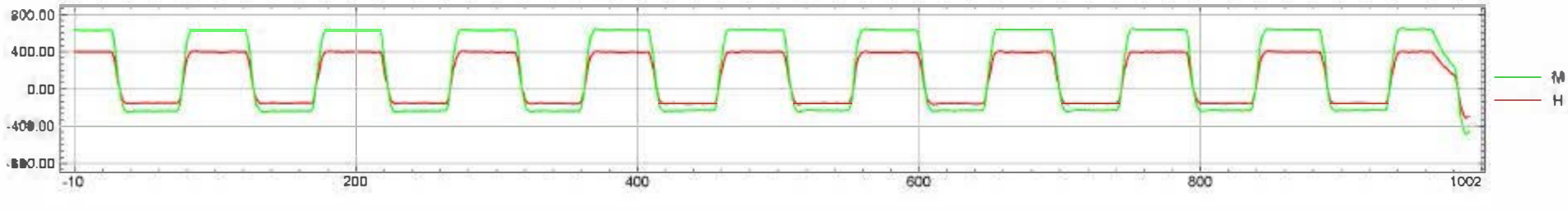
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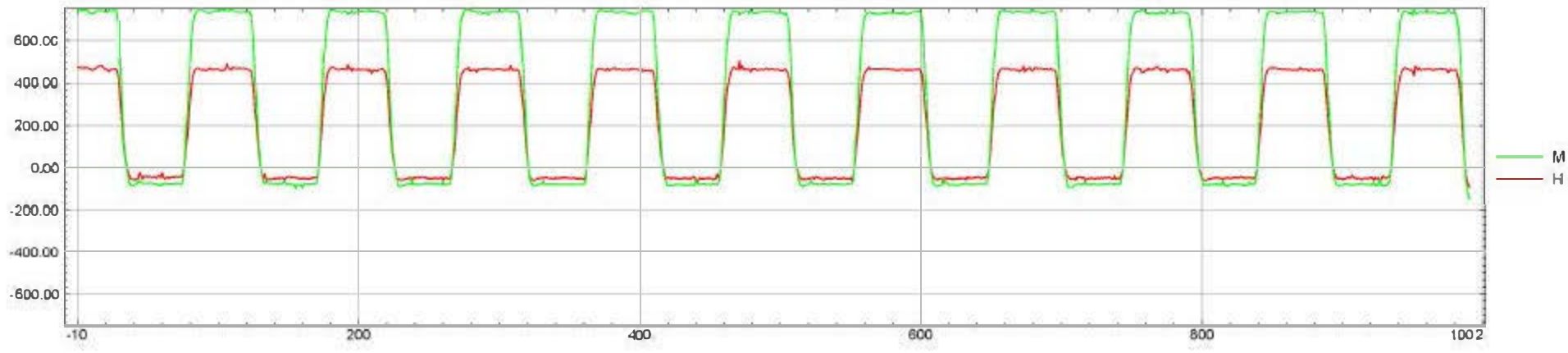
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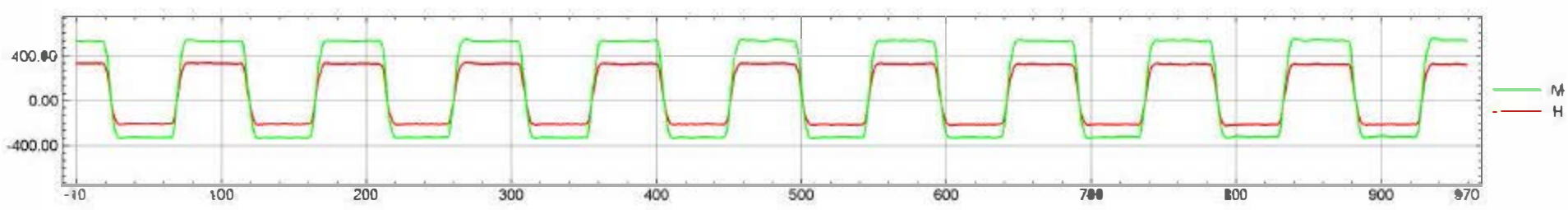
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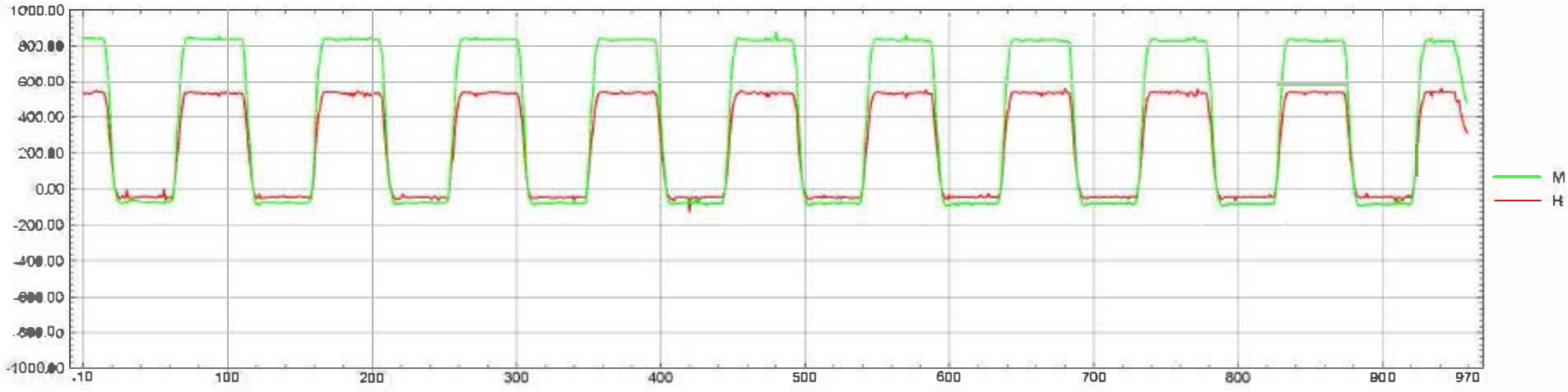
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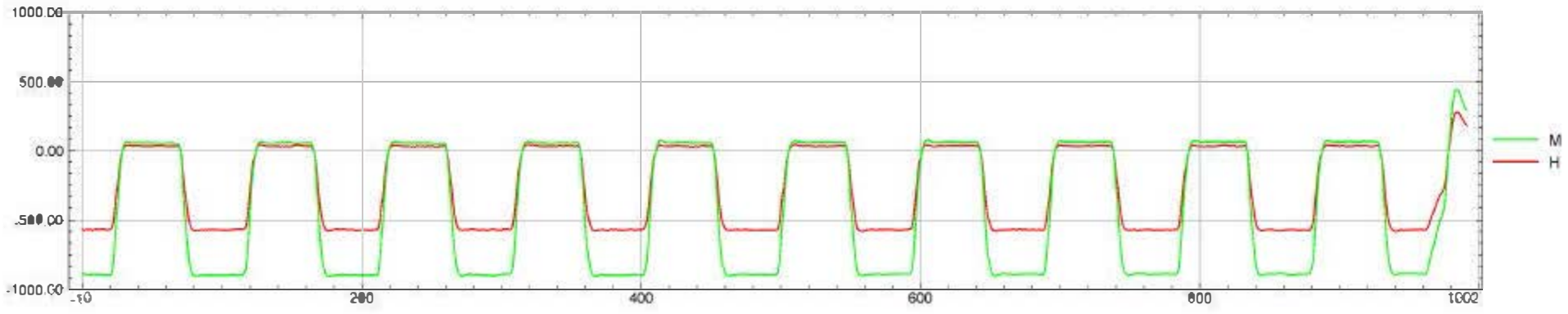
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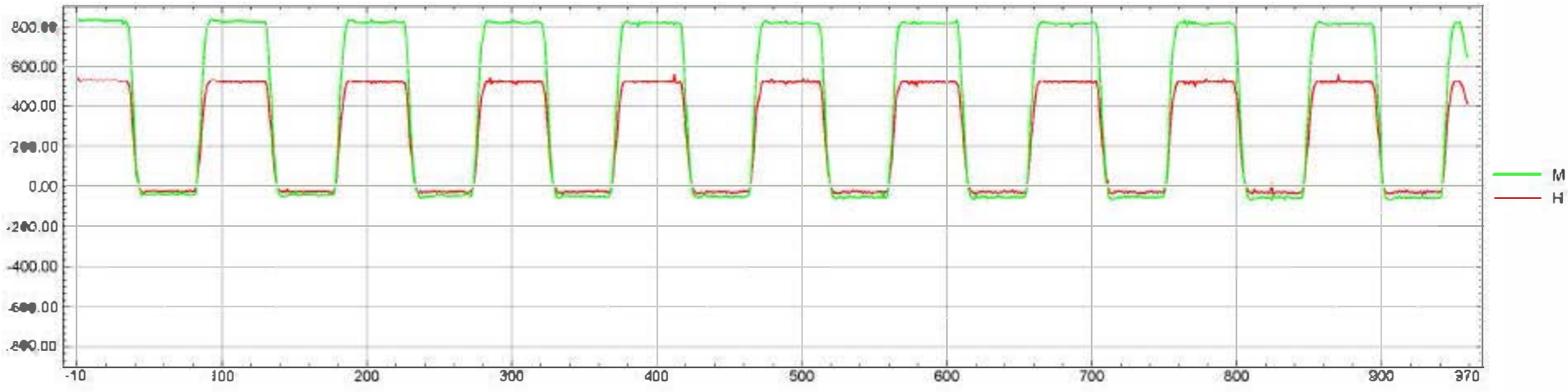
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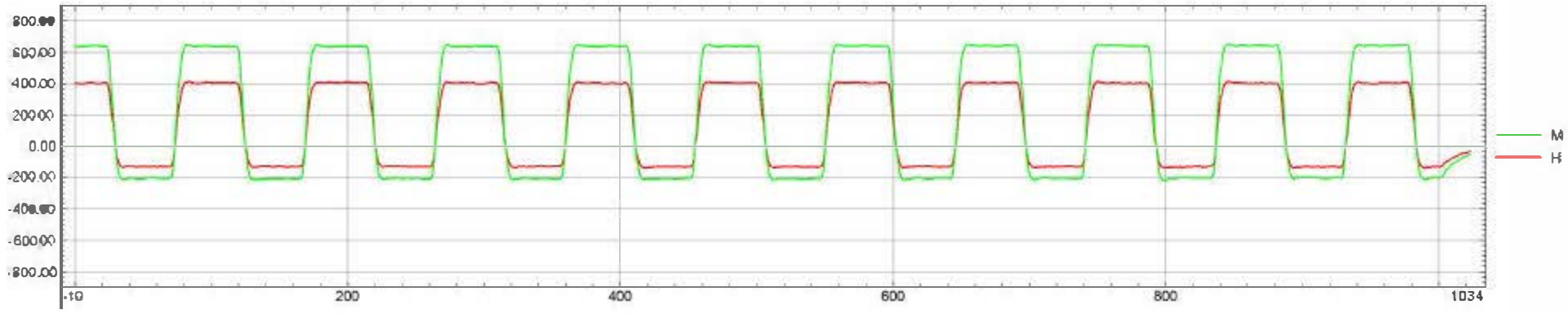
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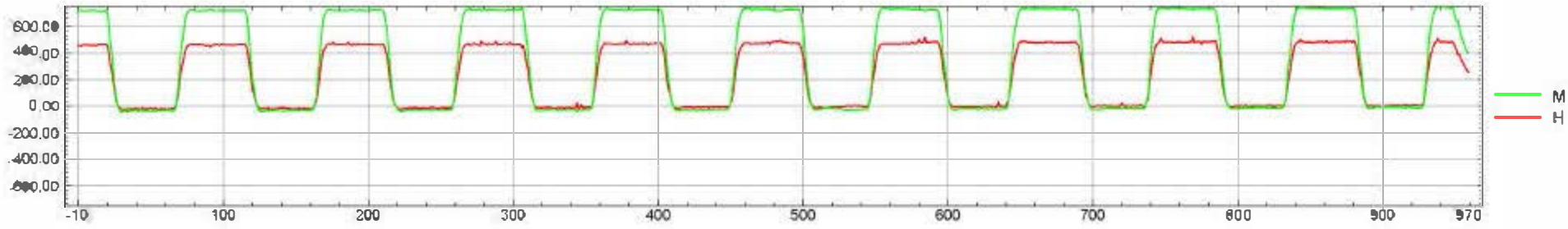
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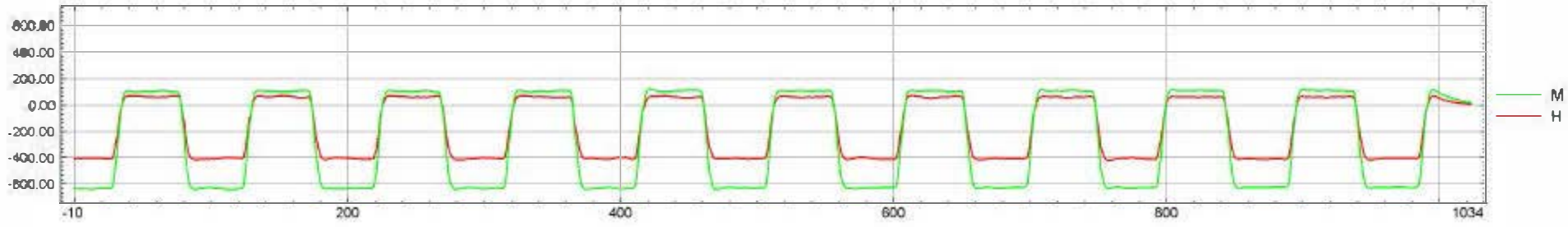
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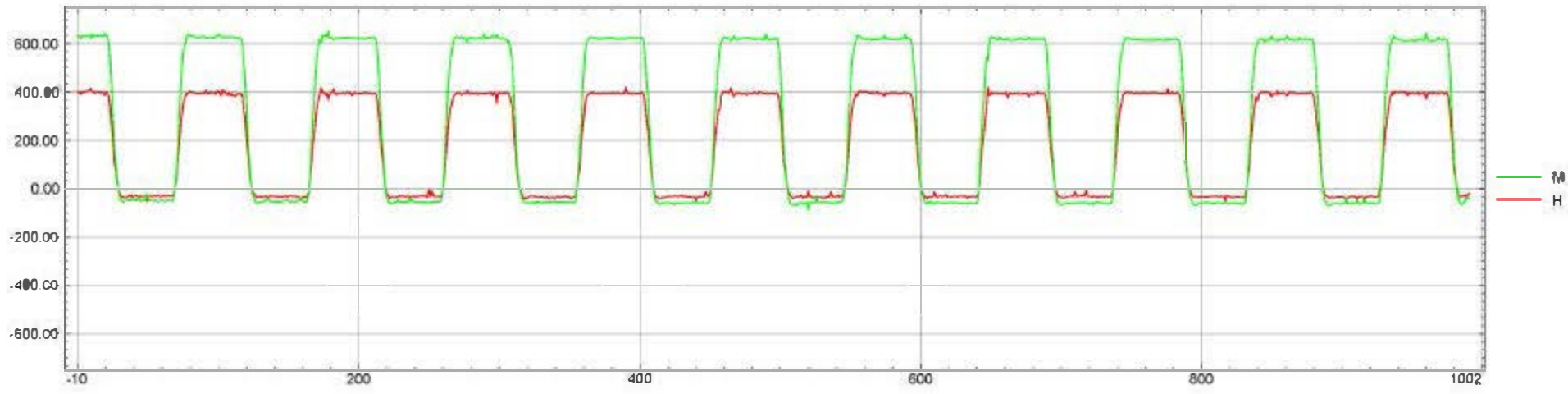
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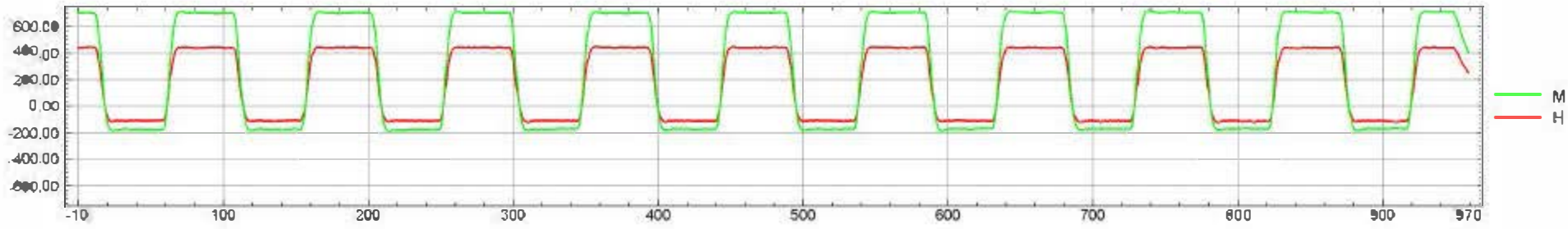
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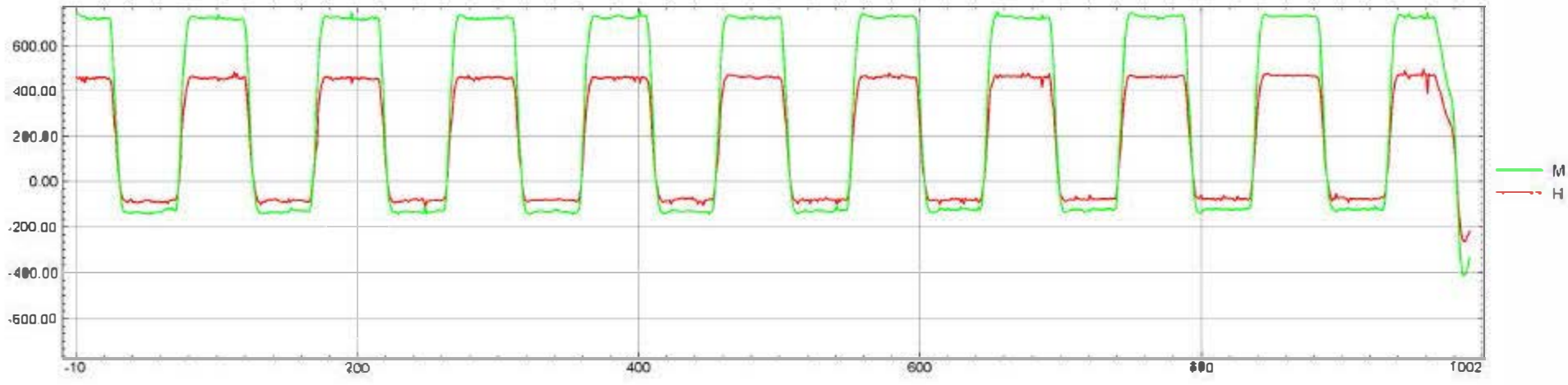
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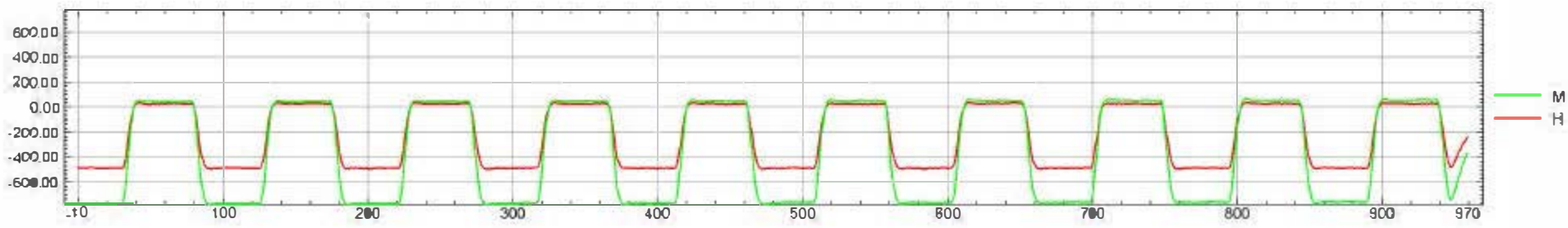
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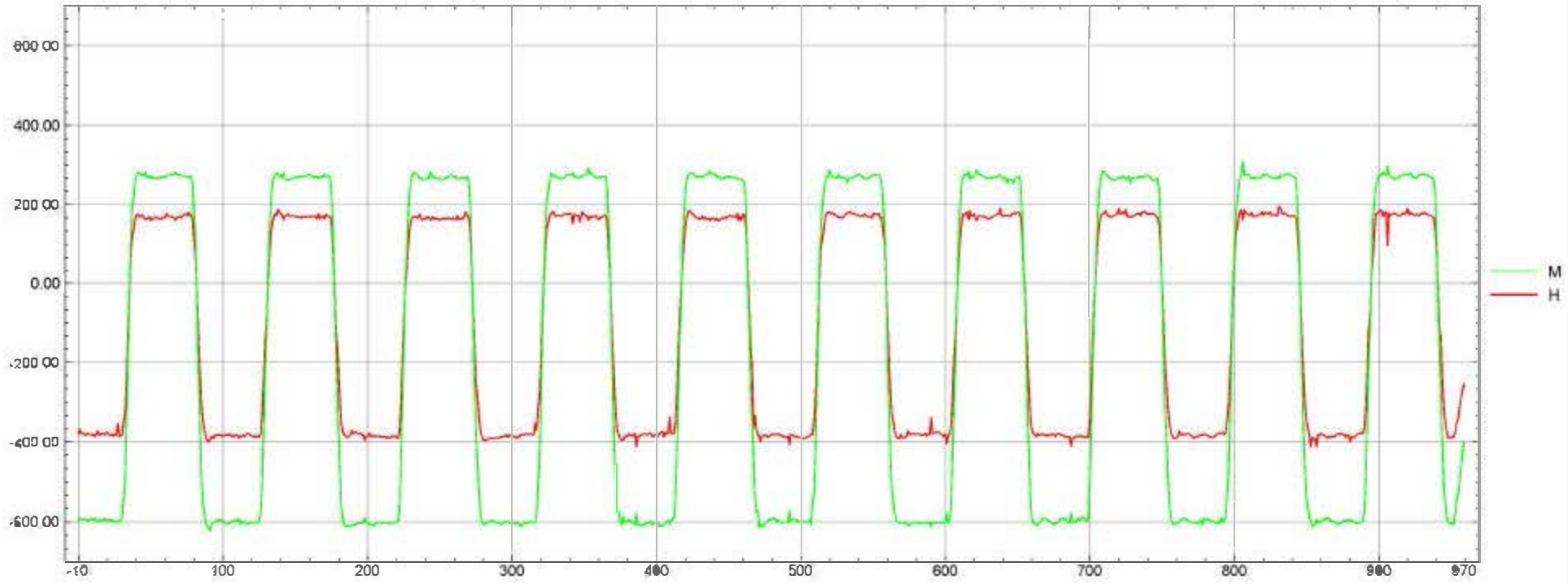
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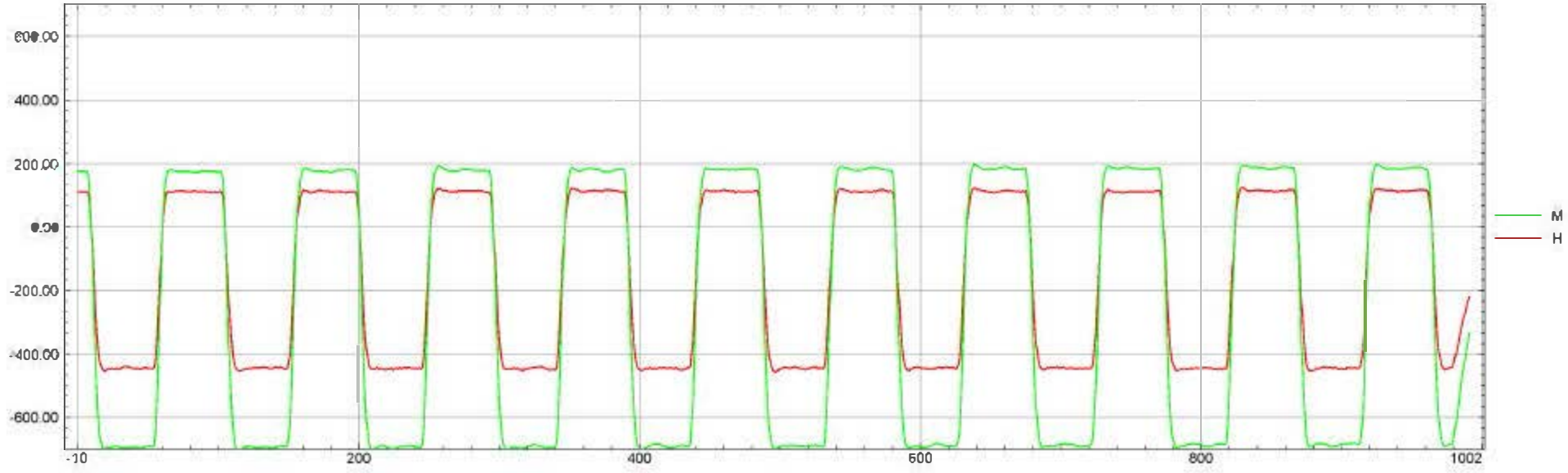
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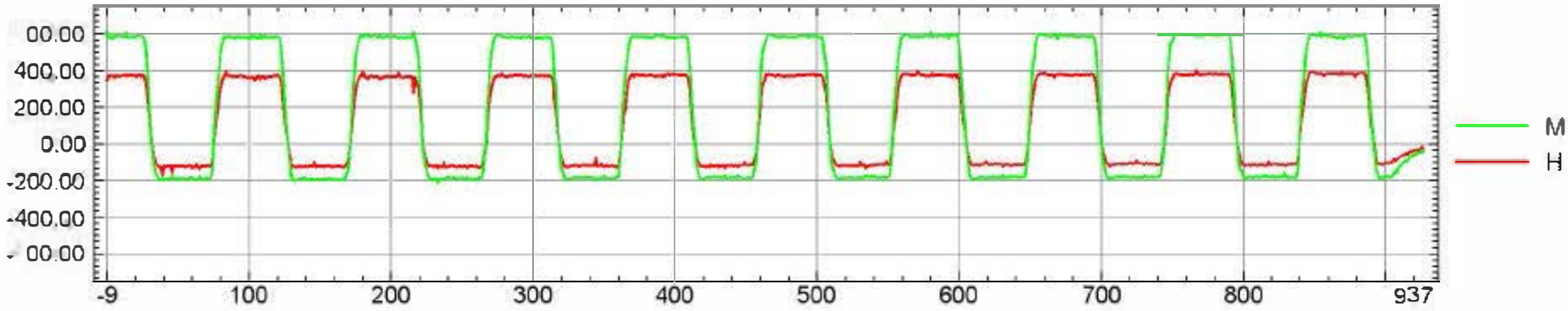
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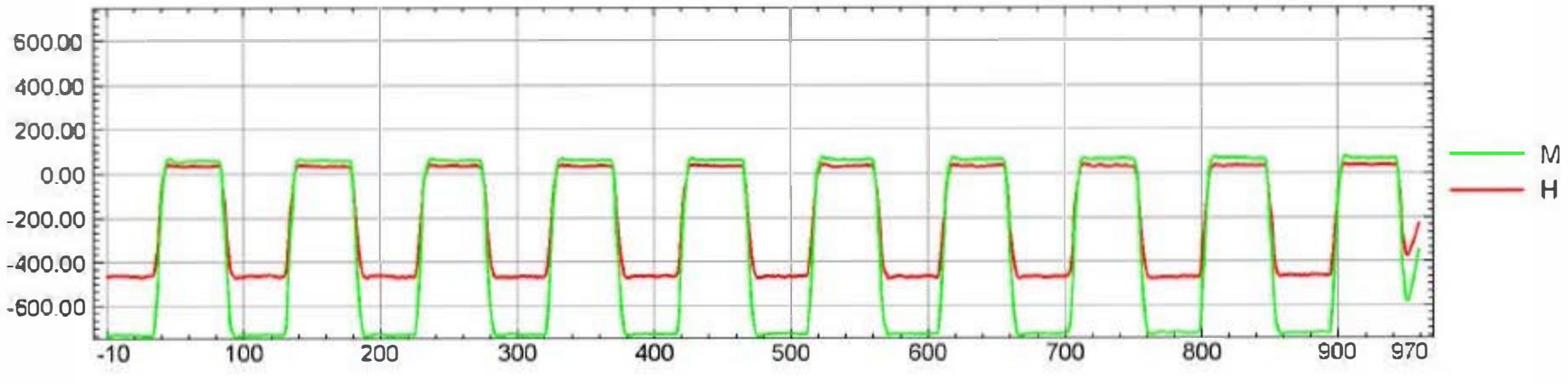
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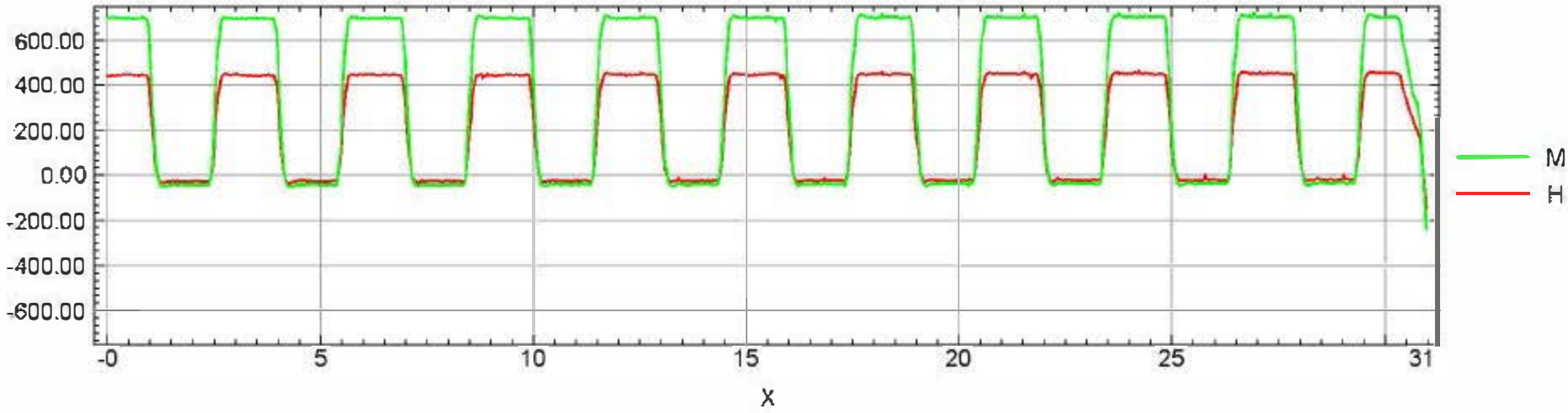
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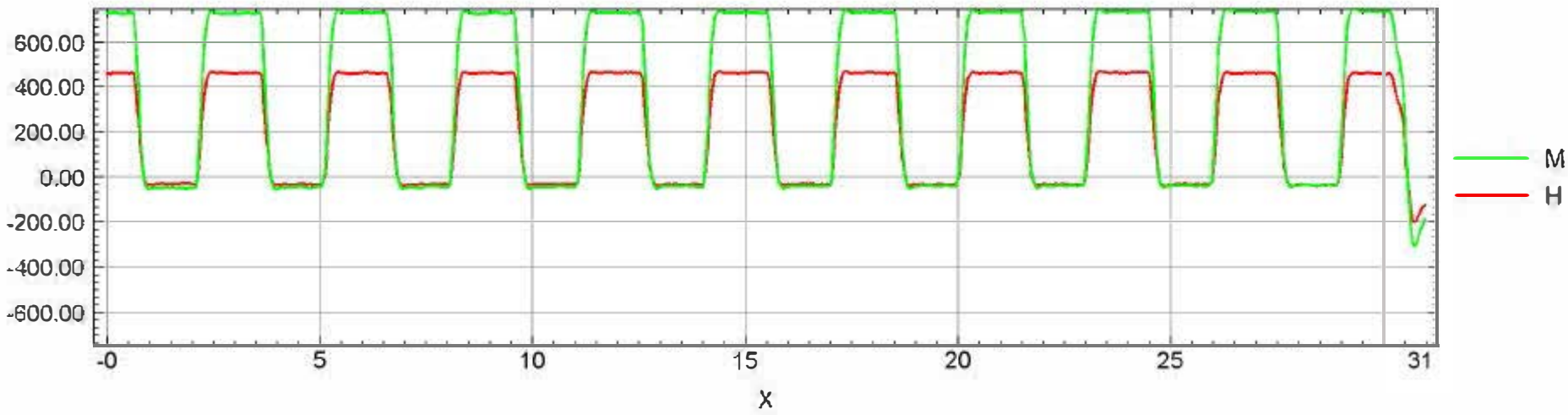
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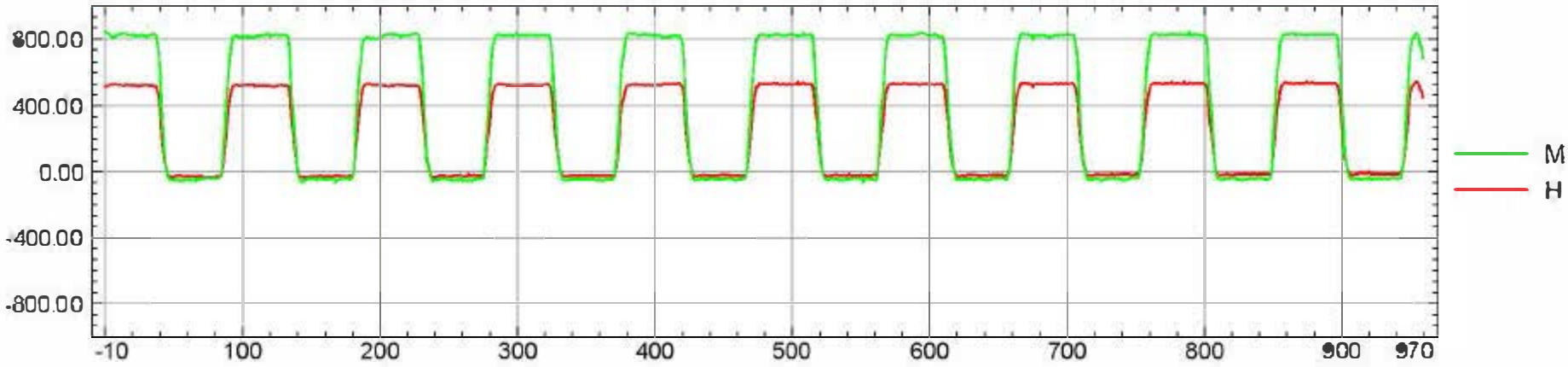
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QC: TM-5 EMU Emulator Data, Bayo Canyon - Right (No.2) Coil



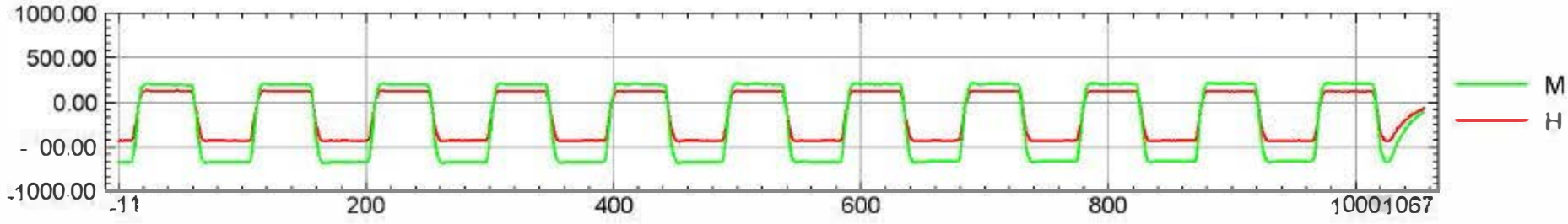
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QC: TM-5 EMU Emulator Data, Bayo Canyon - Left (No.1) Coil



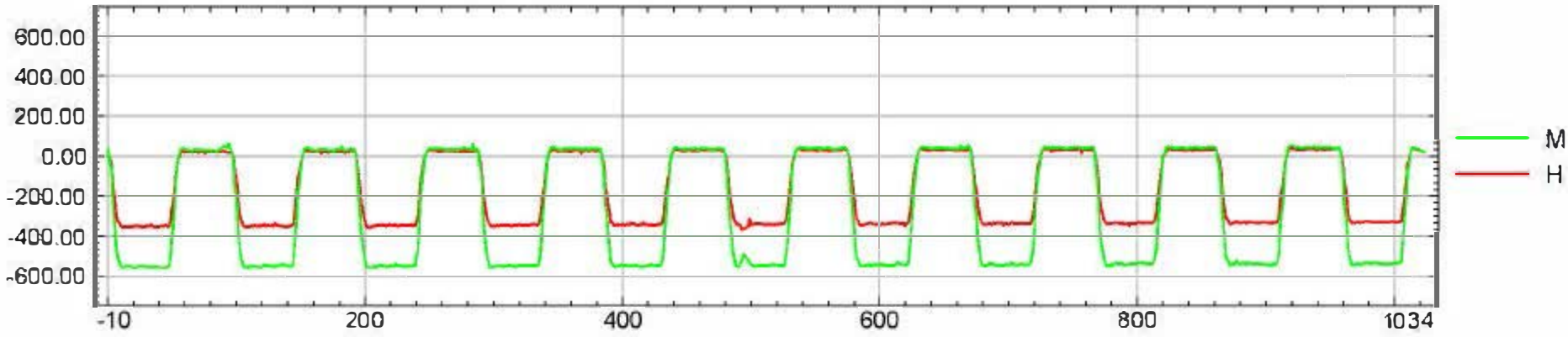
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QC: TM-5 EMU Emulator Data, Bayo Canyon - Right (No.2) Coil



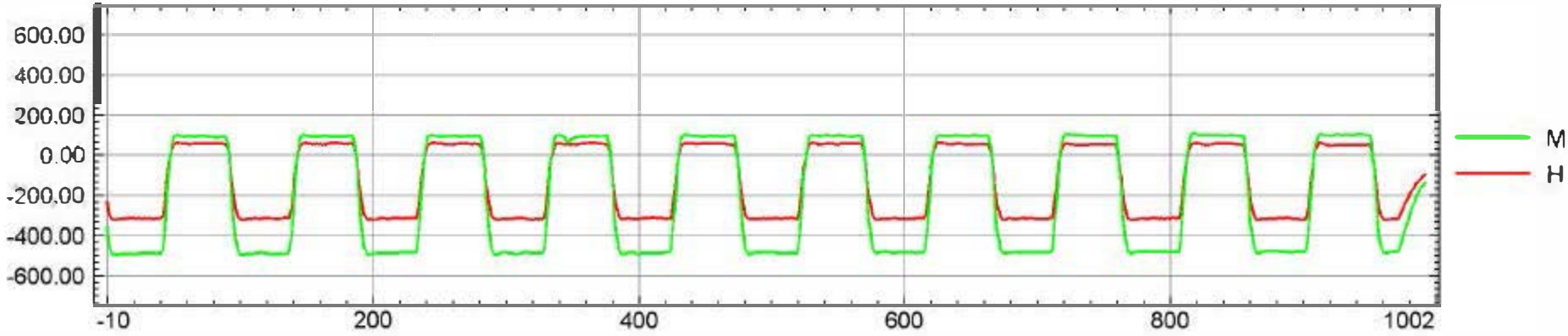
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QC: TM-5 EMU Emulator Data, Bayo Canyon - Left (No.1) Coil



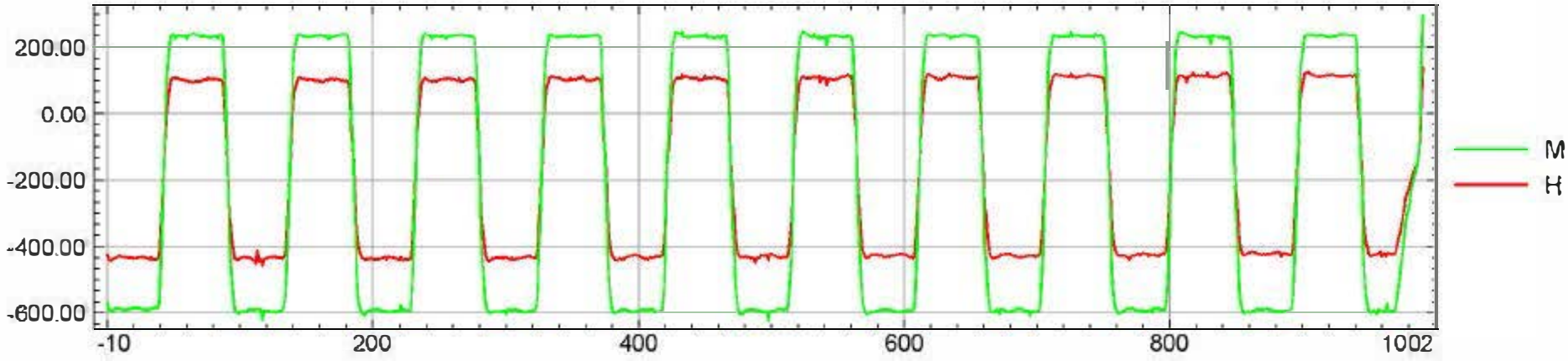
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QC: TM-5 EMU Emulator Data, Bayo Canyon - Right (No.2) Coil



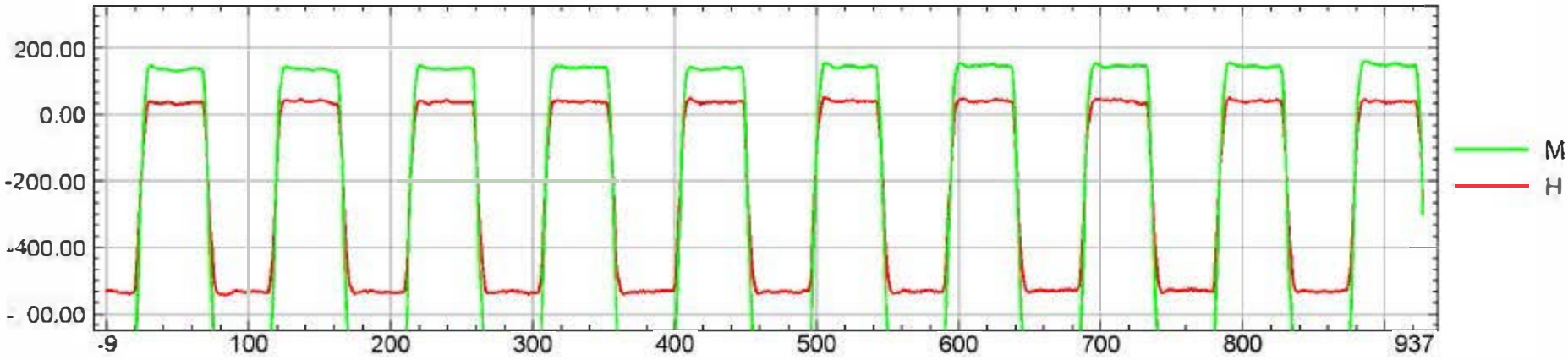
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QC: TM-5 EMU Emulator Data, Bayo Canyon - Left (No.1) Coil



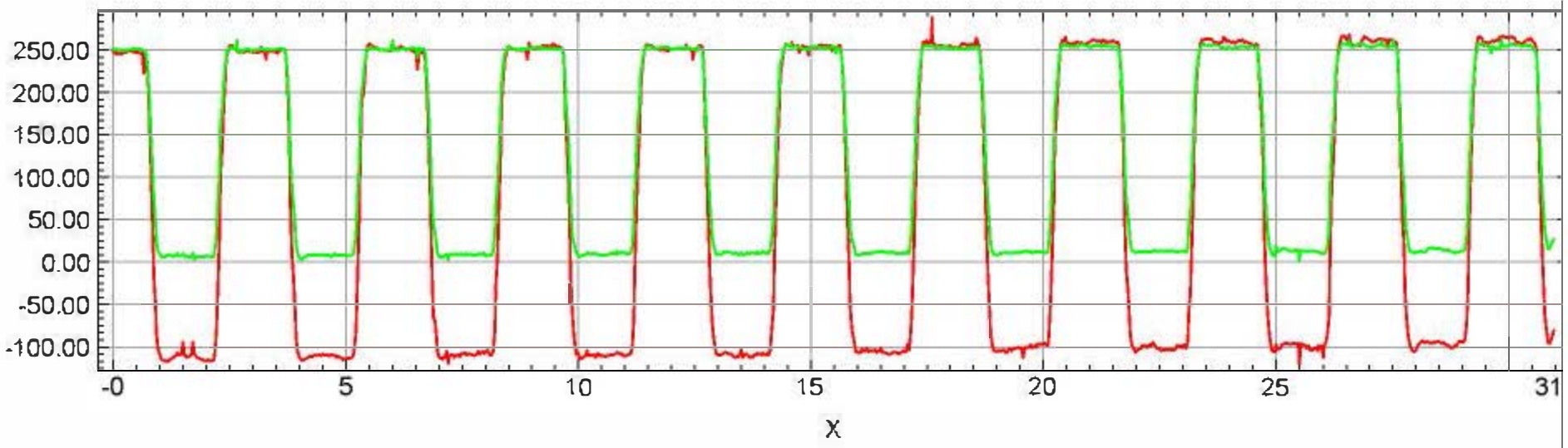
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QC: TM-5 EMU Emulator Data, Bayo Canyon - Right (No.2) Coil



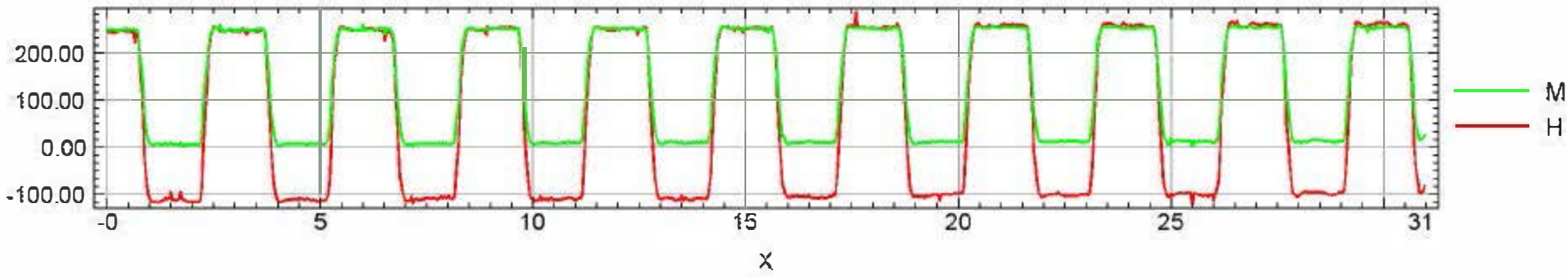
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QC: TM-5 EMU Emulator Data, Bayo Canyon - Left (No.1)



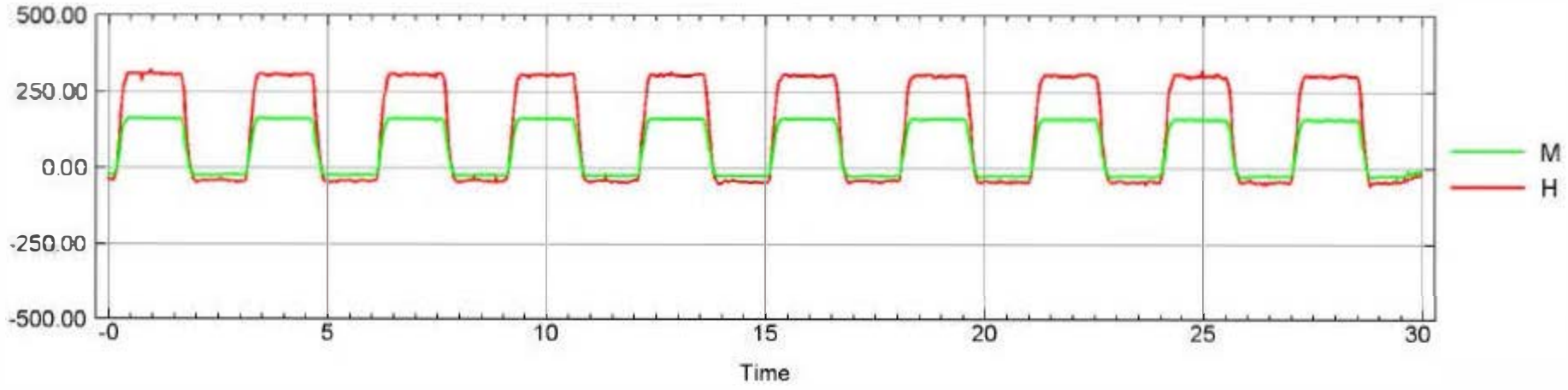
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QC: TM-5 EMU Emulator Data, Bayo Canyon - Right (No.2) Coil



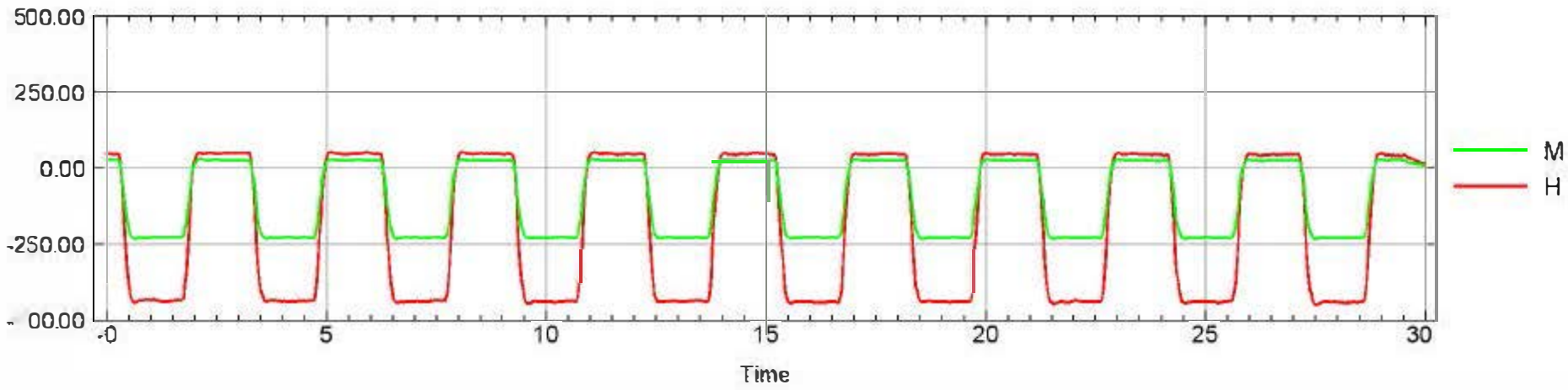
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QC: TM-5 EMU Emulator Data, Bayo Canyon - Left (No.1) Coil



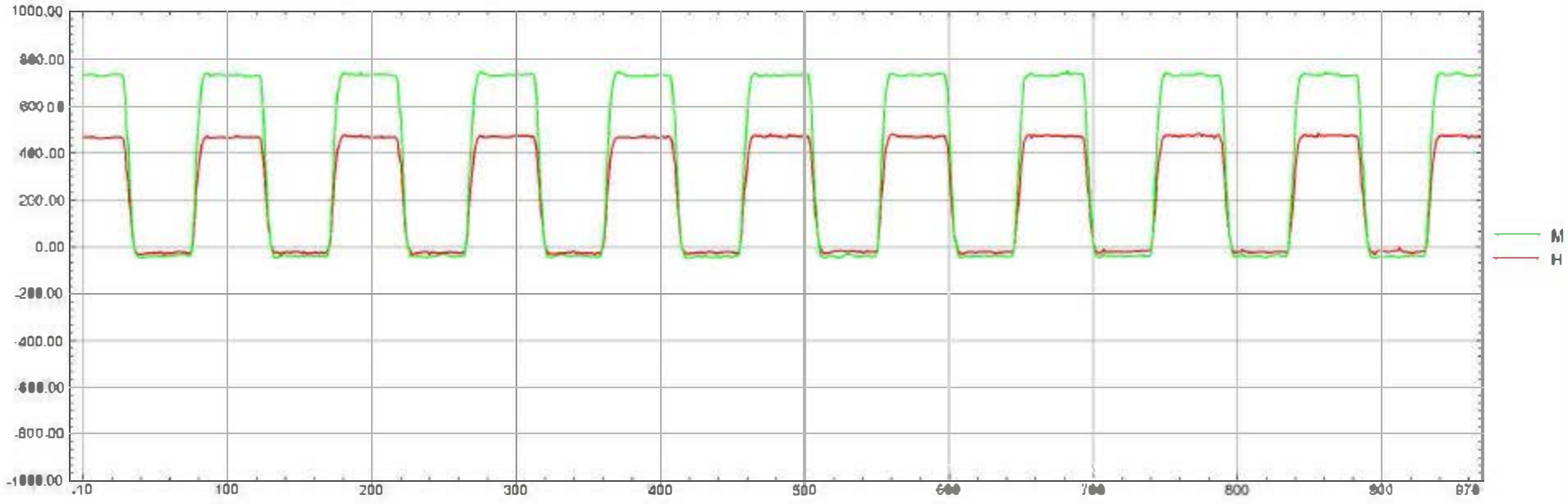
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QC: TM-5 EMU Emulator Data, Bayo Canyon - Right (No.2) Coil



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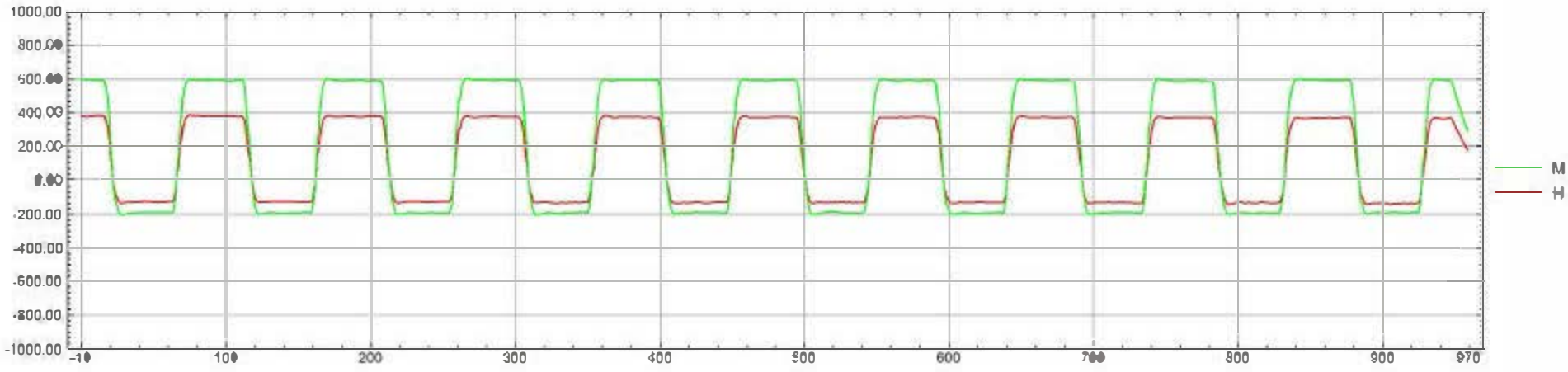
QC: TM-5 EMU Emulator Data, Bayo Canyon, Los Alamos, NM - Left (No.1) Coil



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2007/07/24

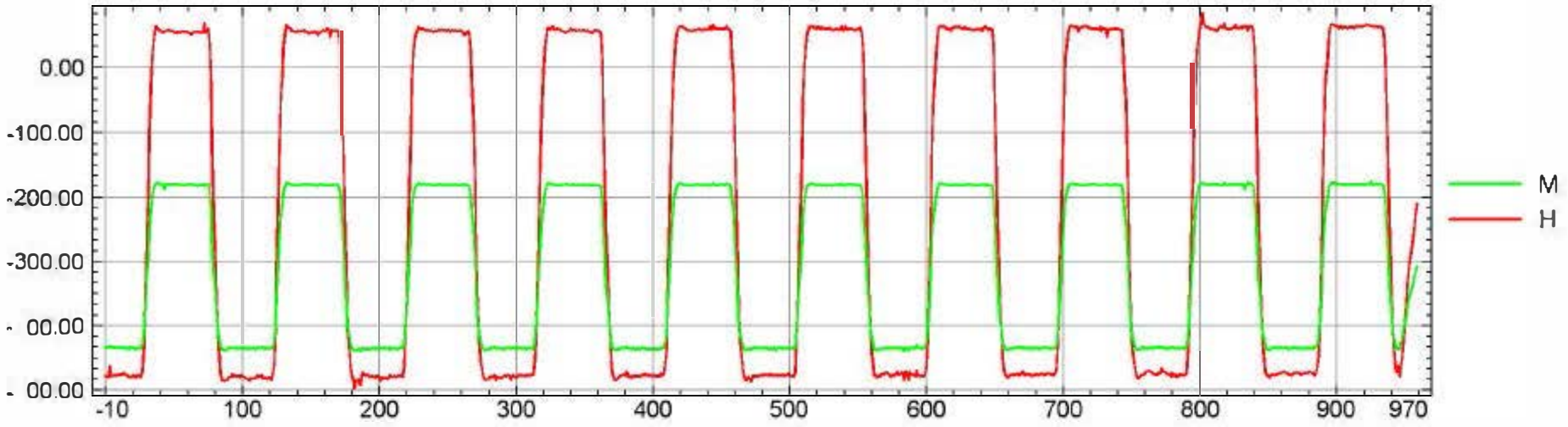
QC: TM-5 EMU Emulator Data, Bayo Canyon, Los Alamos, NM - Right (No.2) Coil



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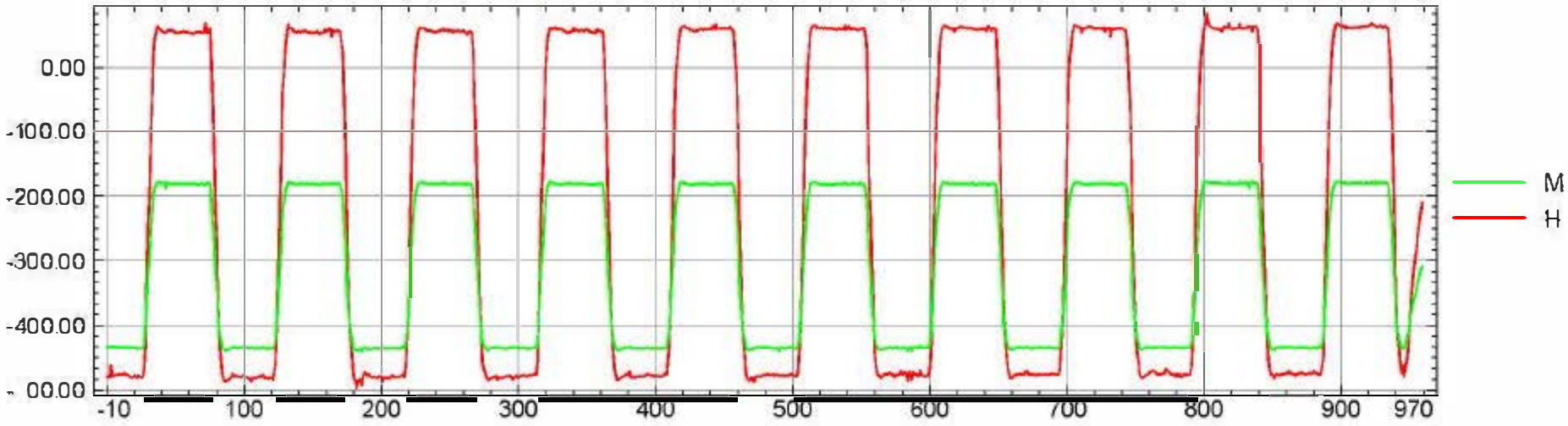
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QC: TM-5 EMU Emulator Data, Bayo Canyon - Left (No.1) Coil



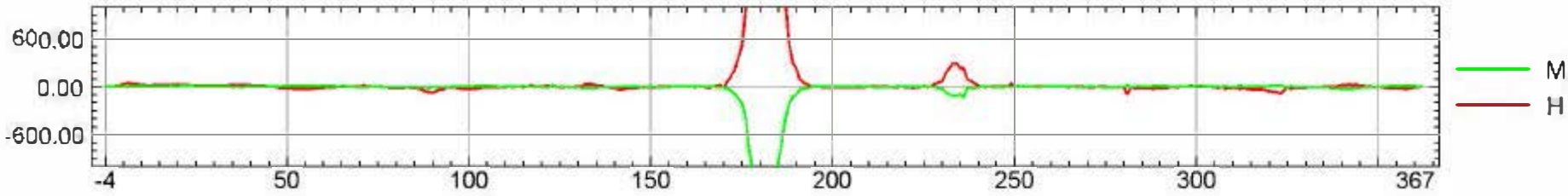
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QC: TM-5 EMU Emulator Data, Bayo Canyon - Right (No.2) Coil



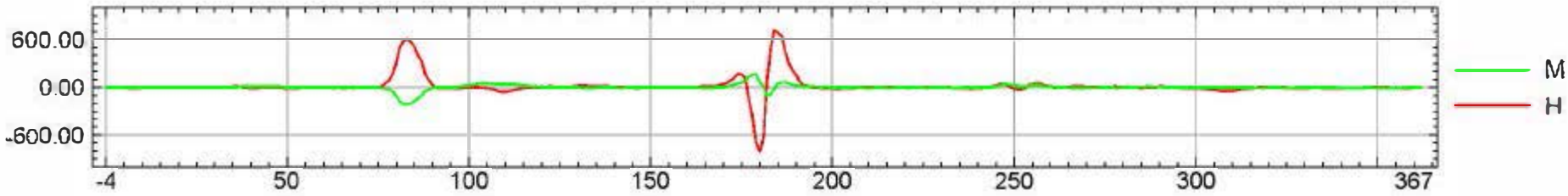
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A081407 - LAG check (LEFT coil) in COTTON mode



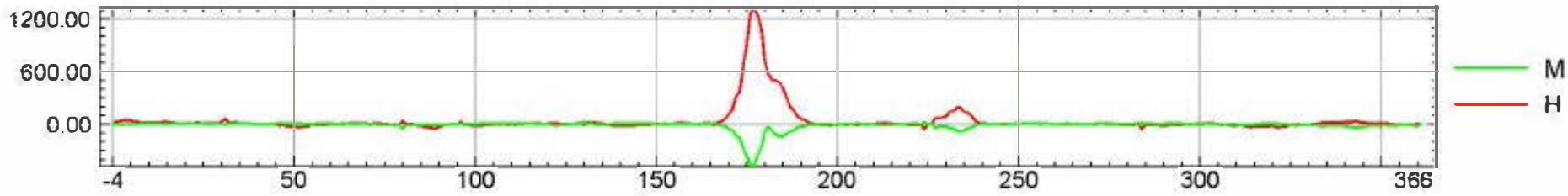
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A081407 - LAG check (RIGHT coil) in COTTON mode



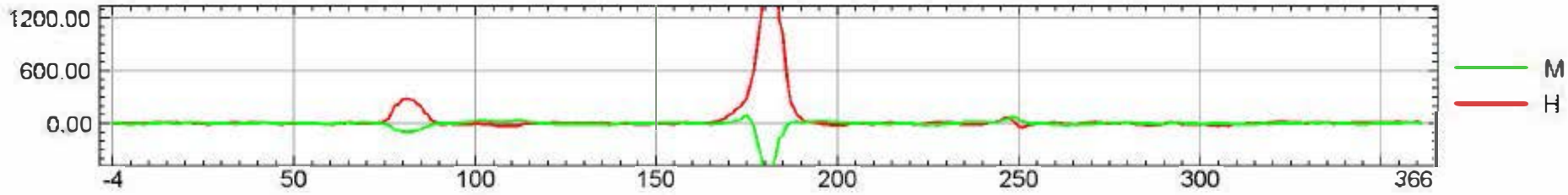
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A081307 - LAG check (LEFT coil) profile in COTTON mode



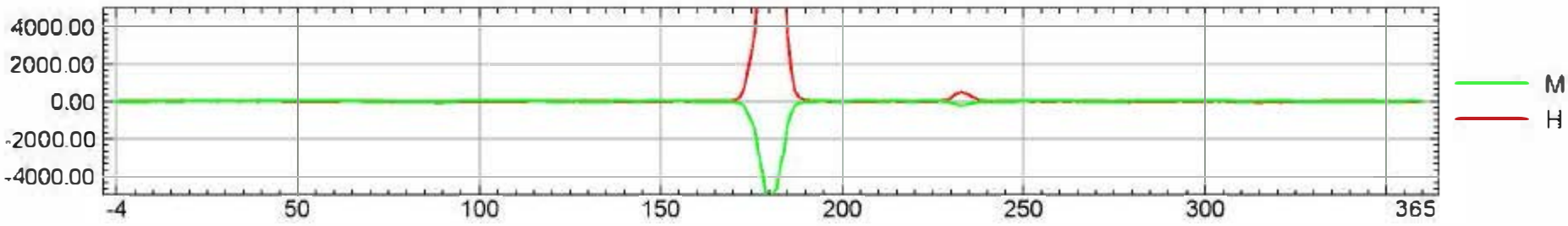
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A081307 - LAG check (RIGHT coil) profile in COTTON mode



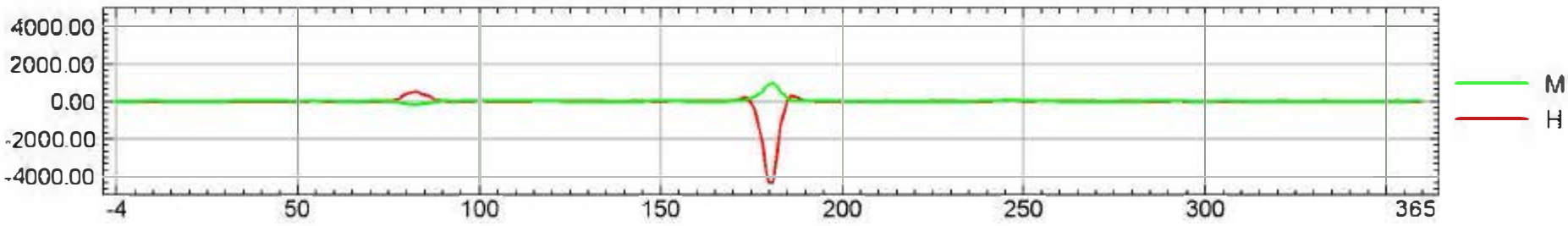
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A081007 - LAG check (LEFT coil) profile in cotton mode



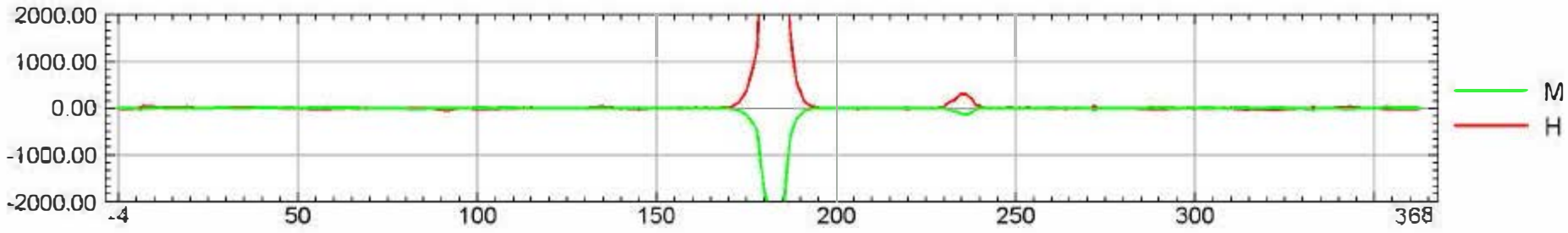
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A081007 - LAG check (RIGHT coil) profile in cotton mode



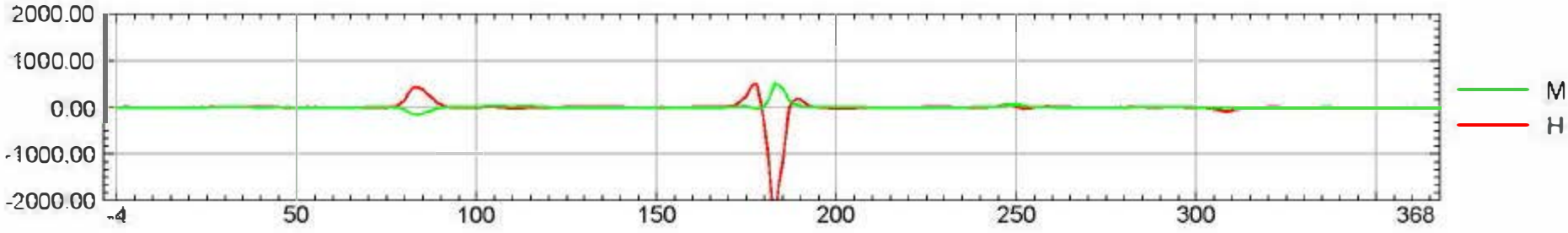
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A080907 - LAG check (LEFT coil) profile in COTTON mode



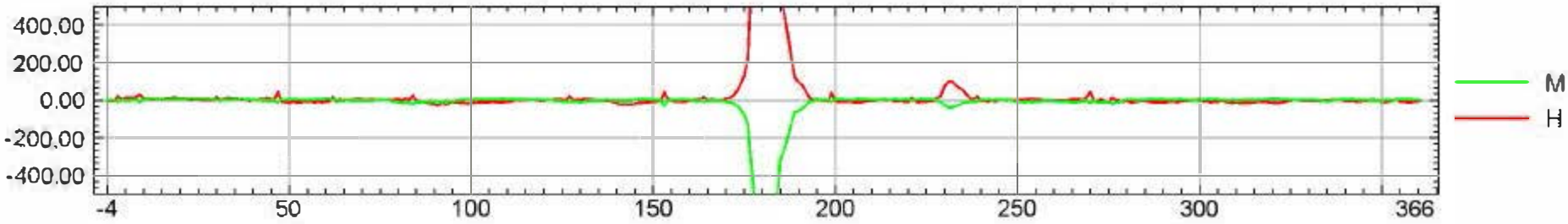
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A080907 - LAG check (RIGHT coil) profile in COTTON mode



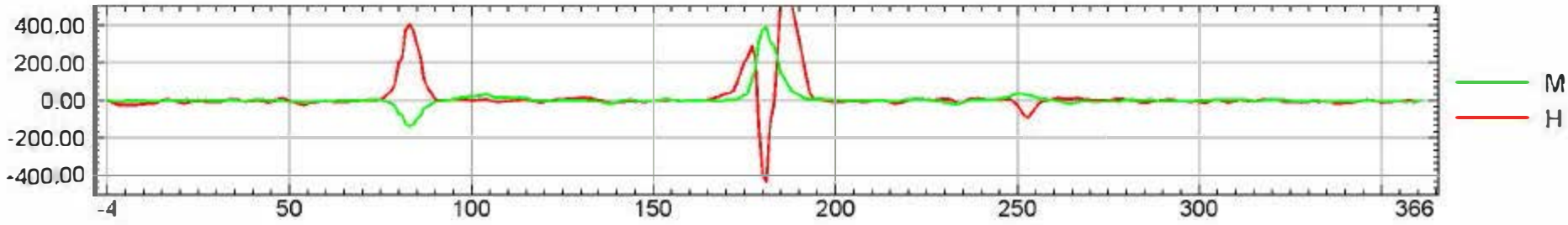
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A080807 - LAG Check (LEFT coil) profile in COTTON mode



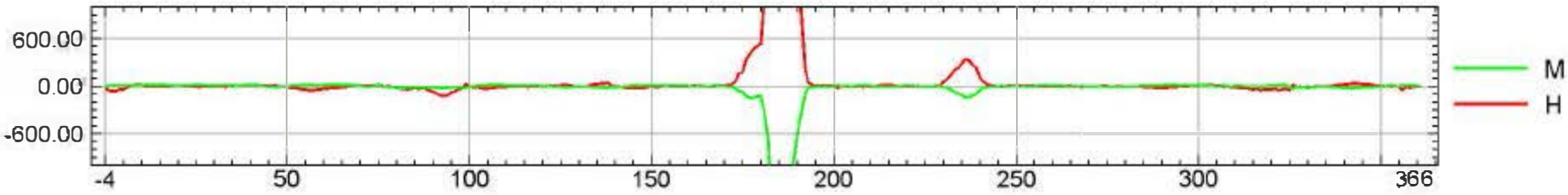
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A080807 - LAG Check (RIGHT coil) profile in COTTON mode



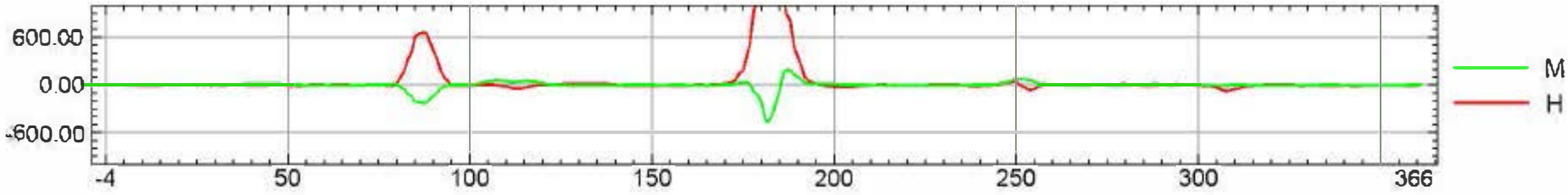
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A080707 - LAG check (LEFT coil) profile in COTTON mode



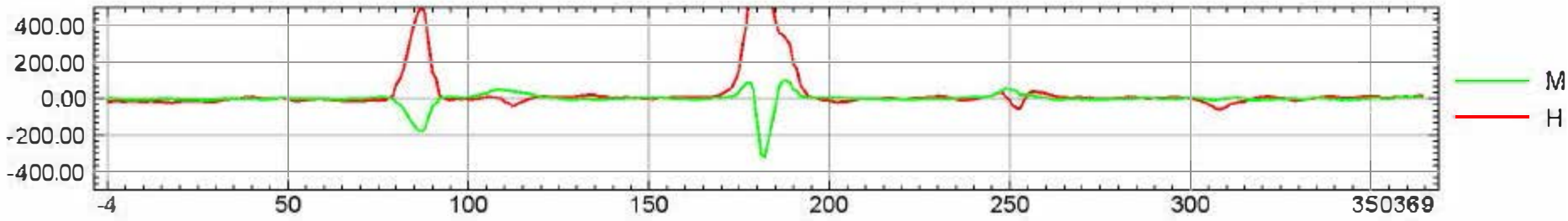
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A080707 - LAG check (RIGHT coil) profile in COTTON mode



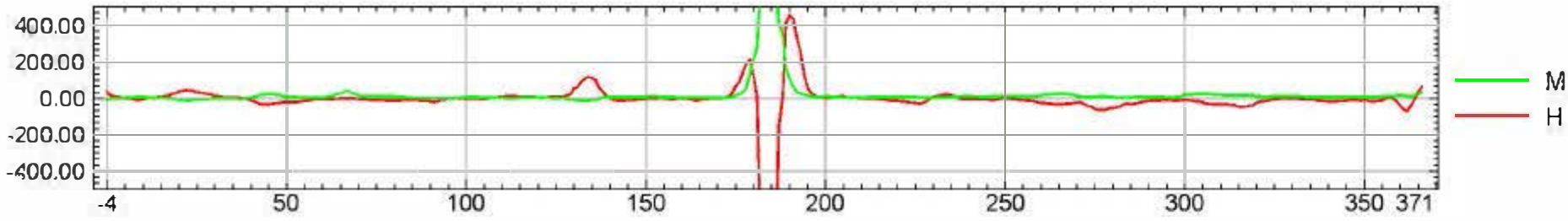
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A080607 - LAG check (LEFT coil) profile in COTTON mode



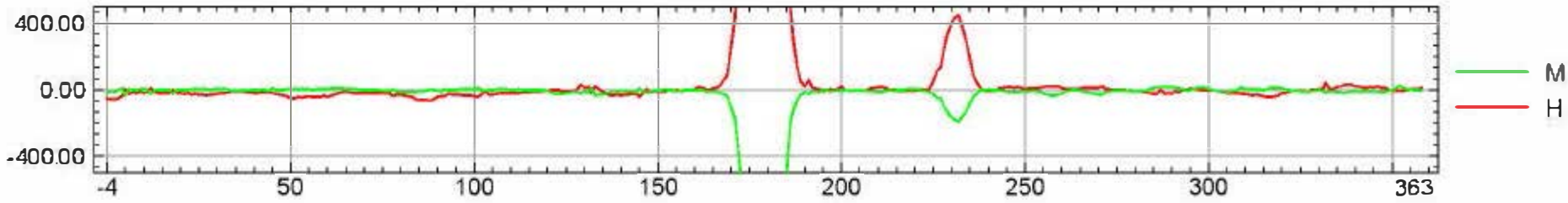
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A080607 - LAG check (RIGHT coil) profile in COTTON mode



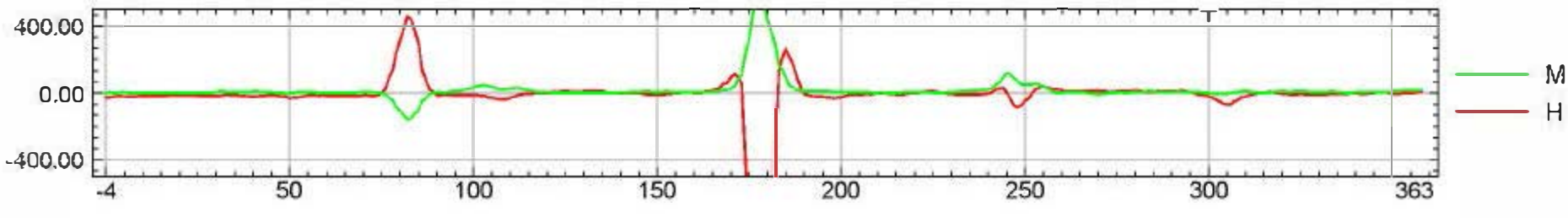
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A080307 - LAG check (LEFT coil) profile in COTTON mode



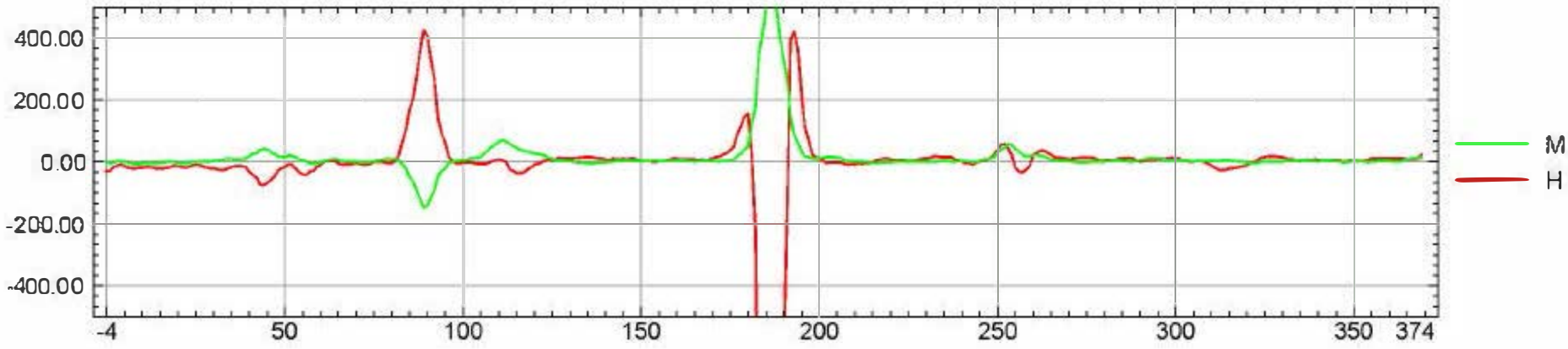
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A080307 - LAG check (RIGHT coil) profile in COTTON mode



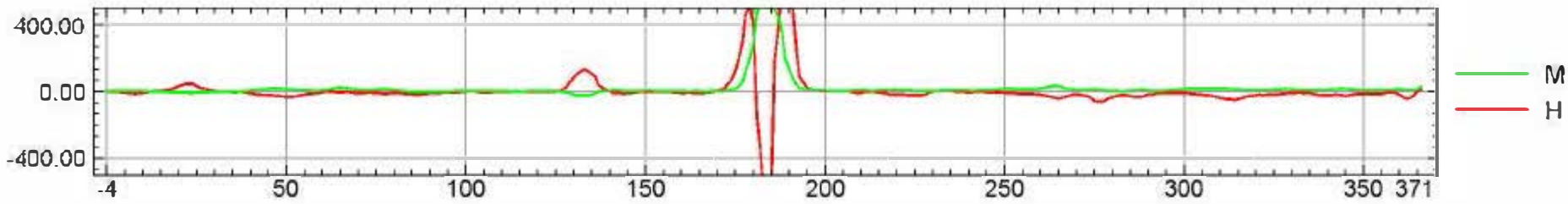
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A080207Y - LAG check (LEFT coil) profile in COTTON mode

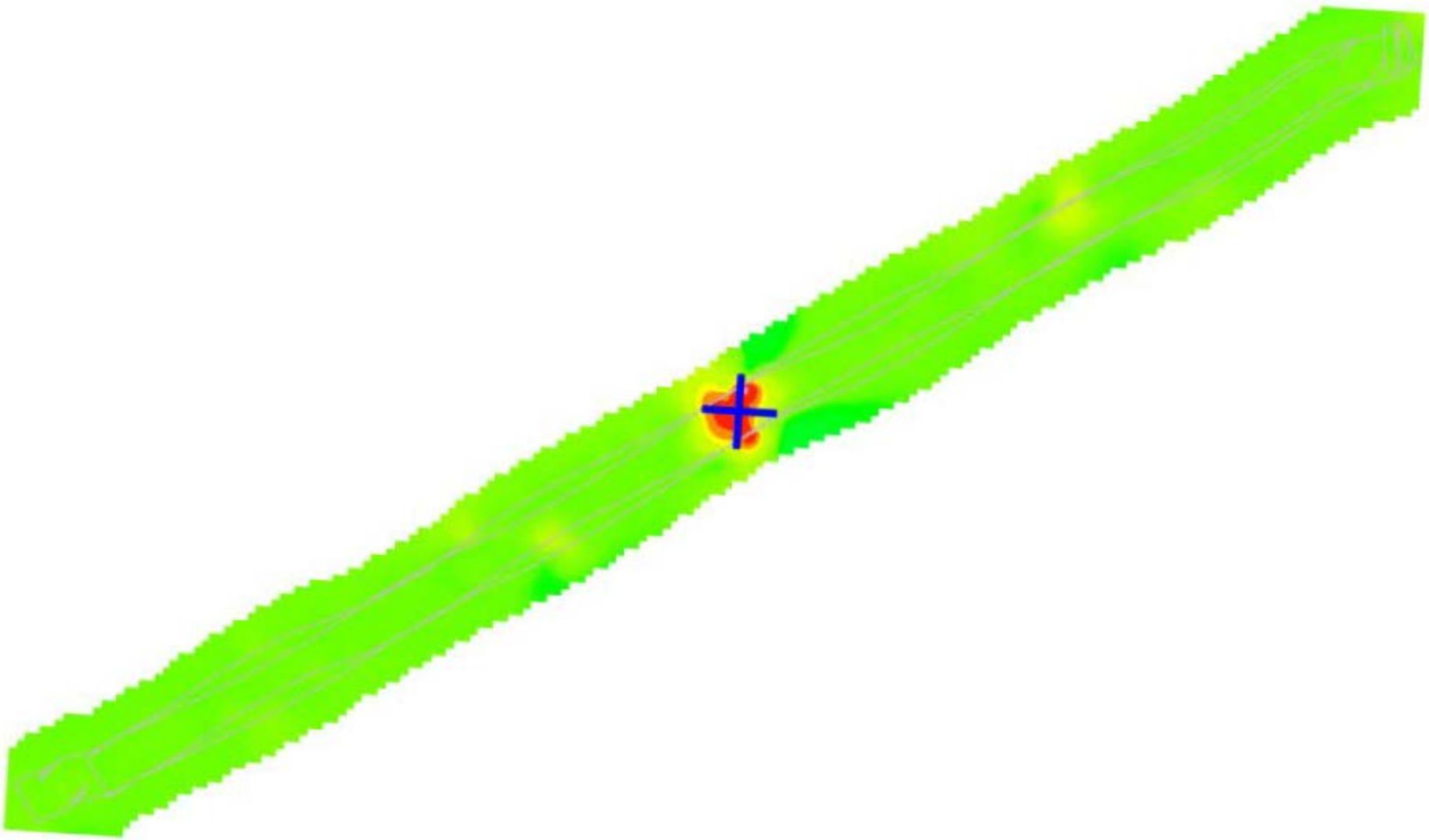


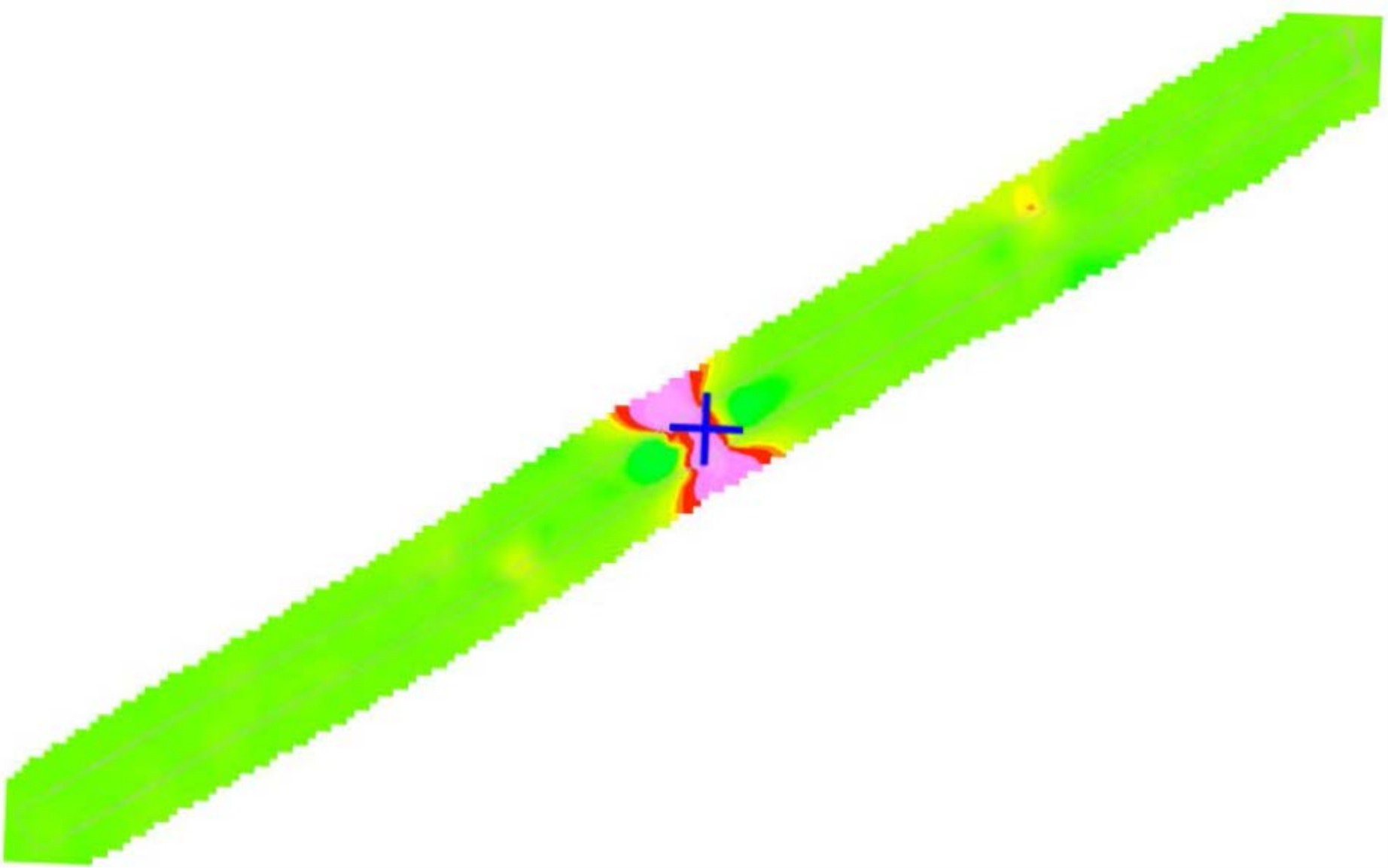
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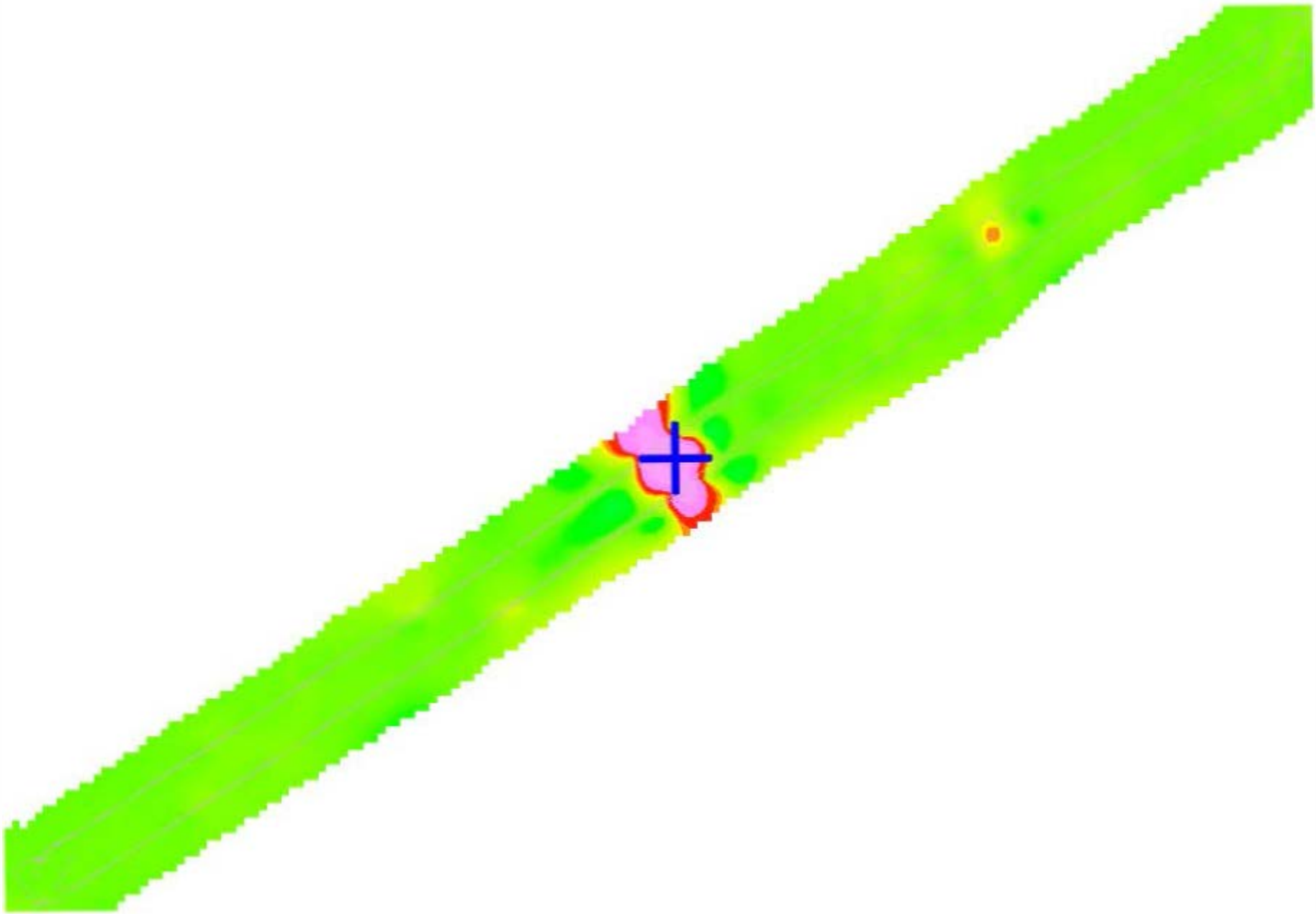
A080207Y - LAG check (RIGHT coil) profile in COTTON mode

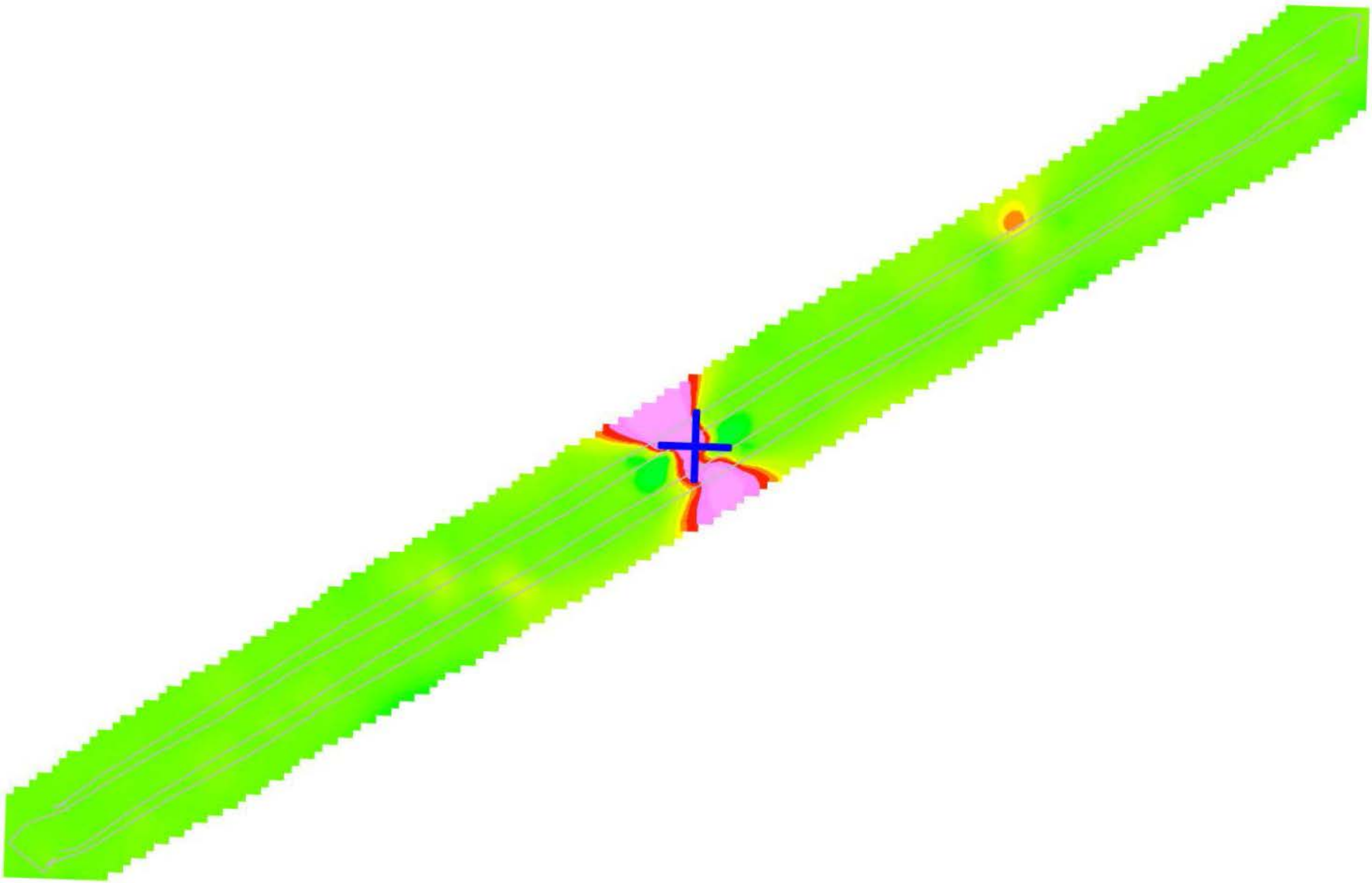


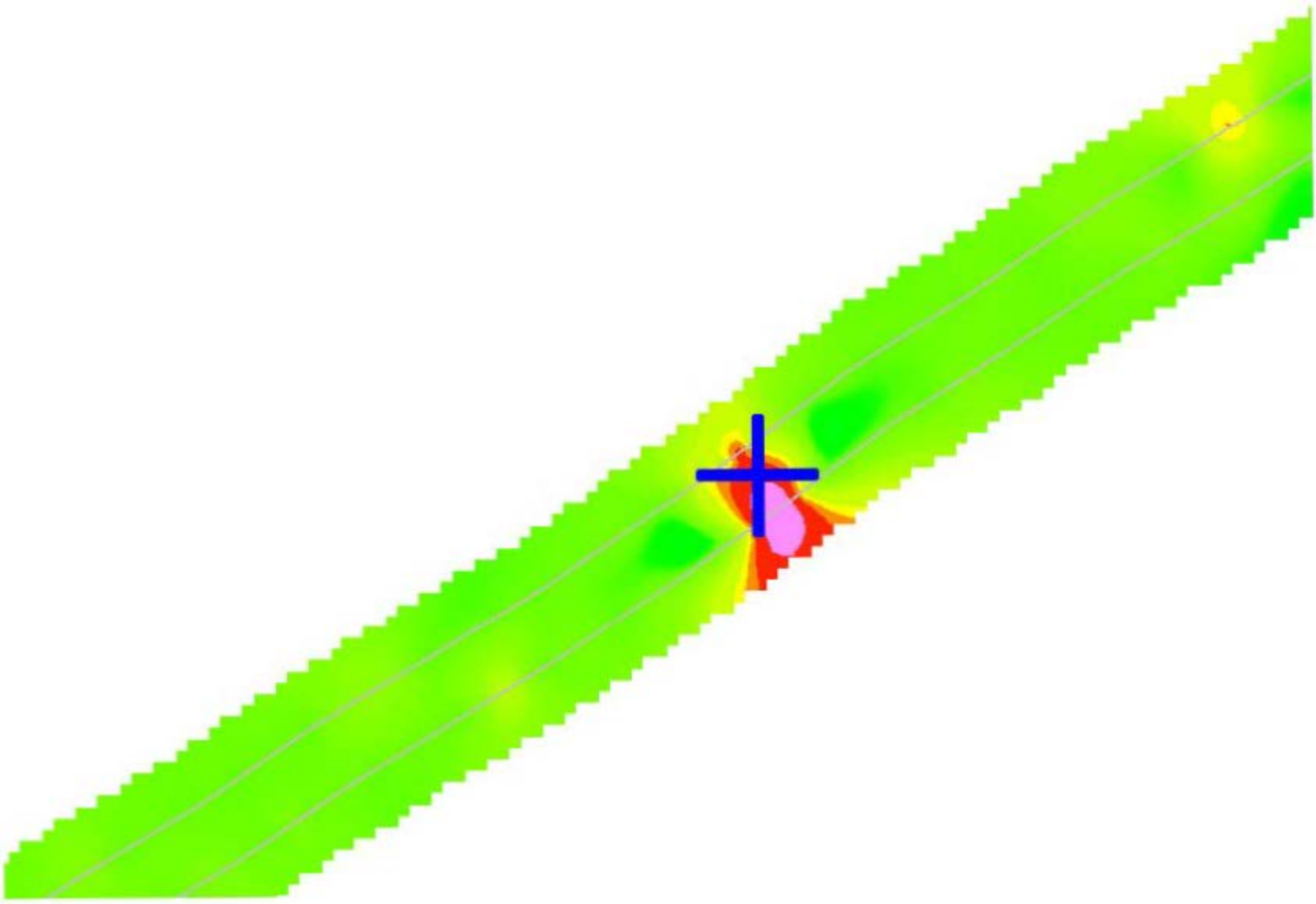
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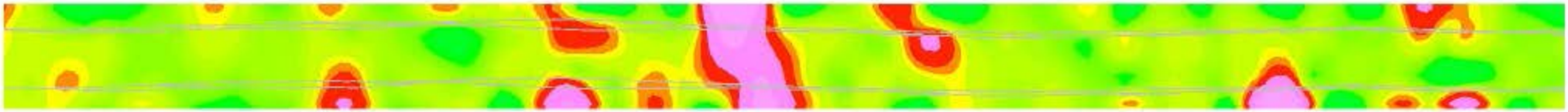


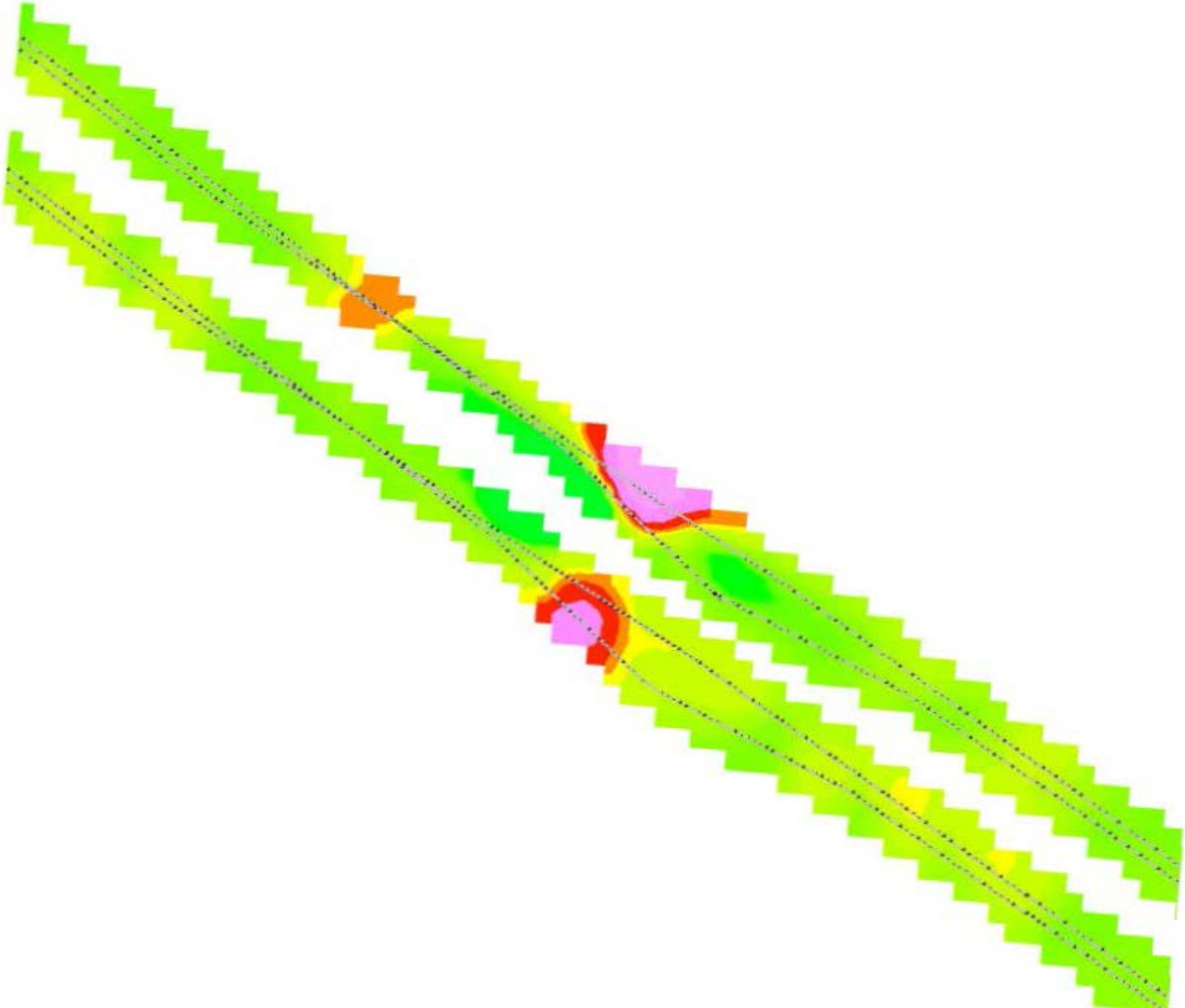


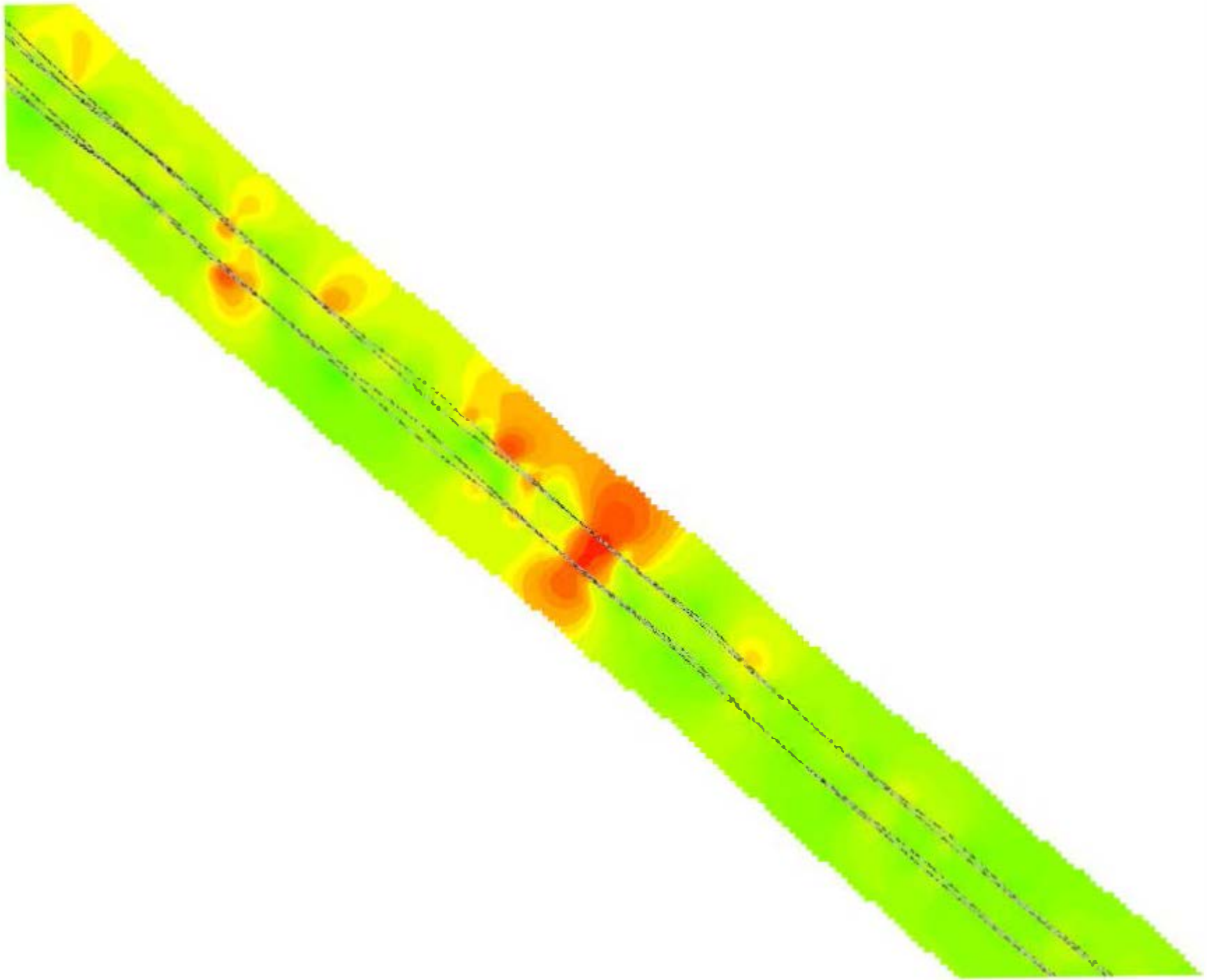


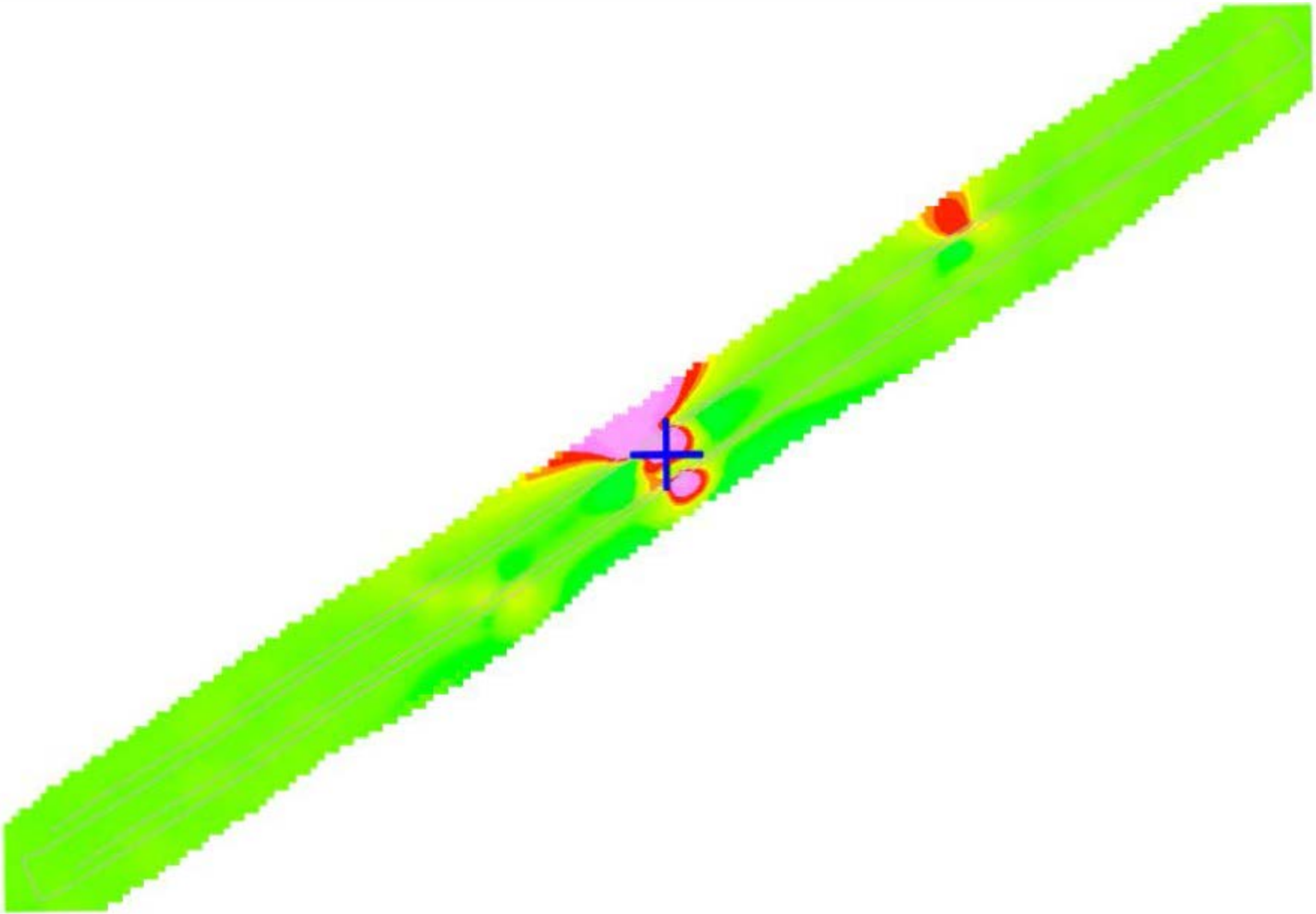


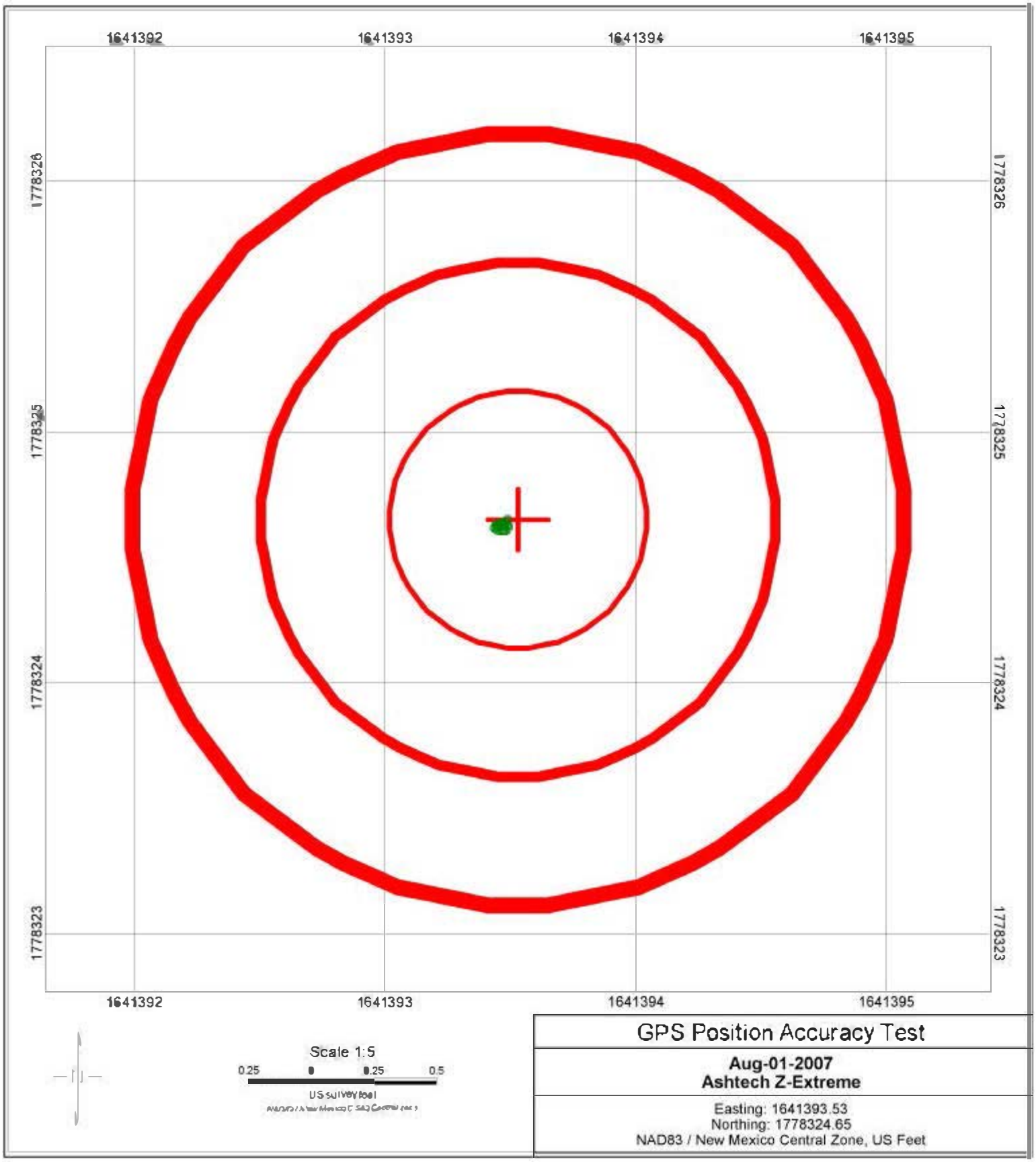








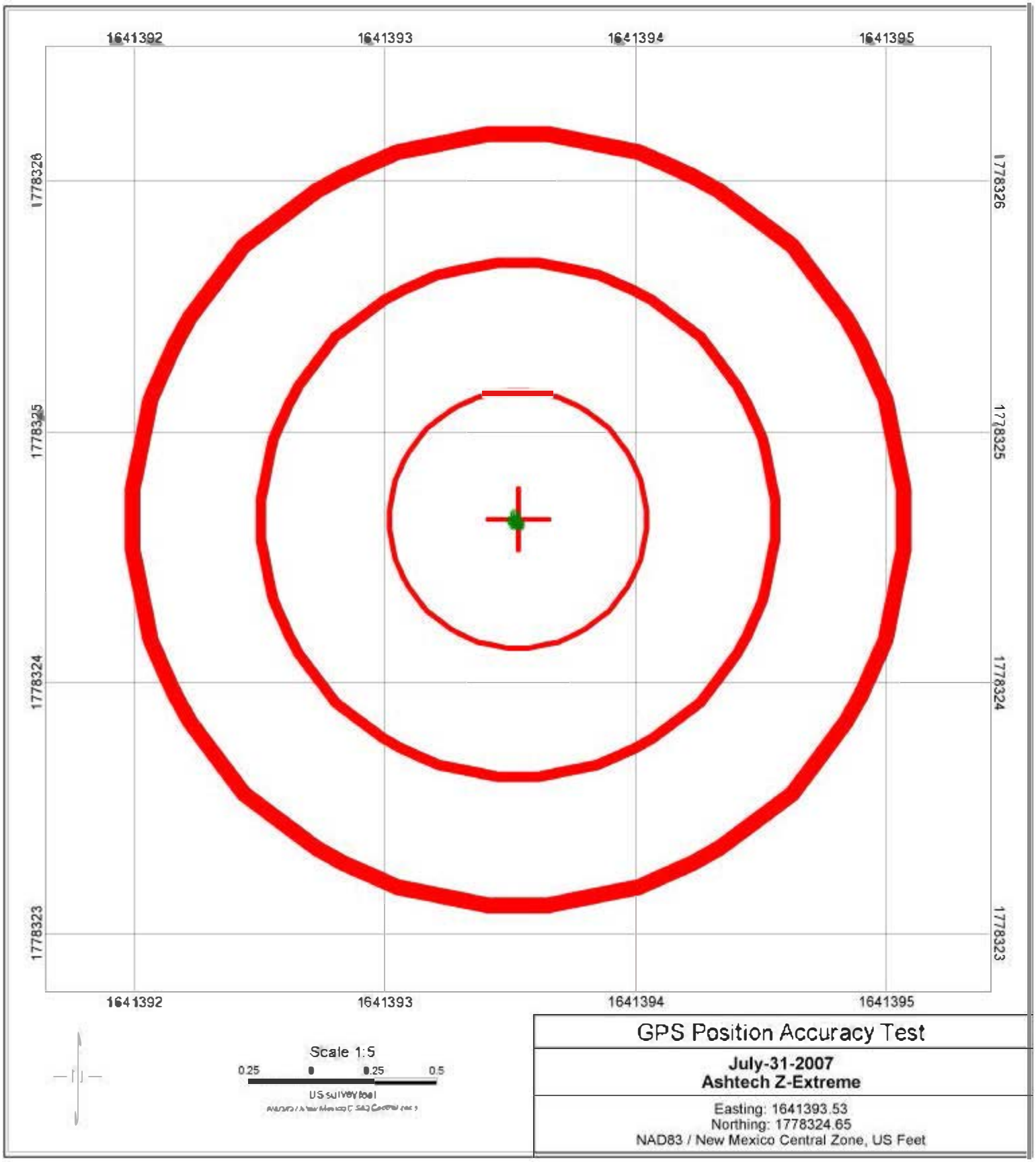




GPS Position Accuracy Test

Aug-01-2007
Ashtech Z-Extreme

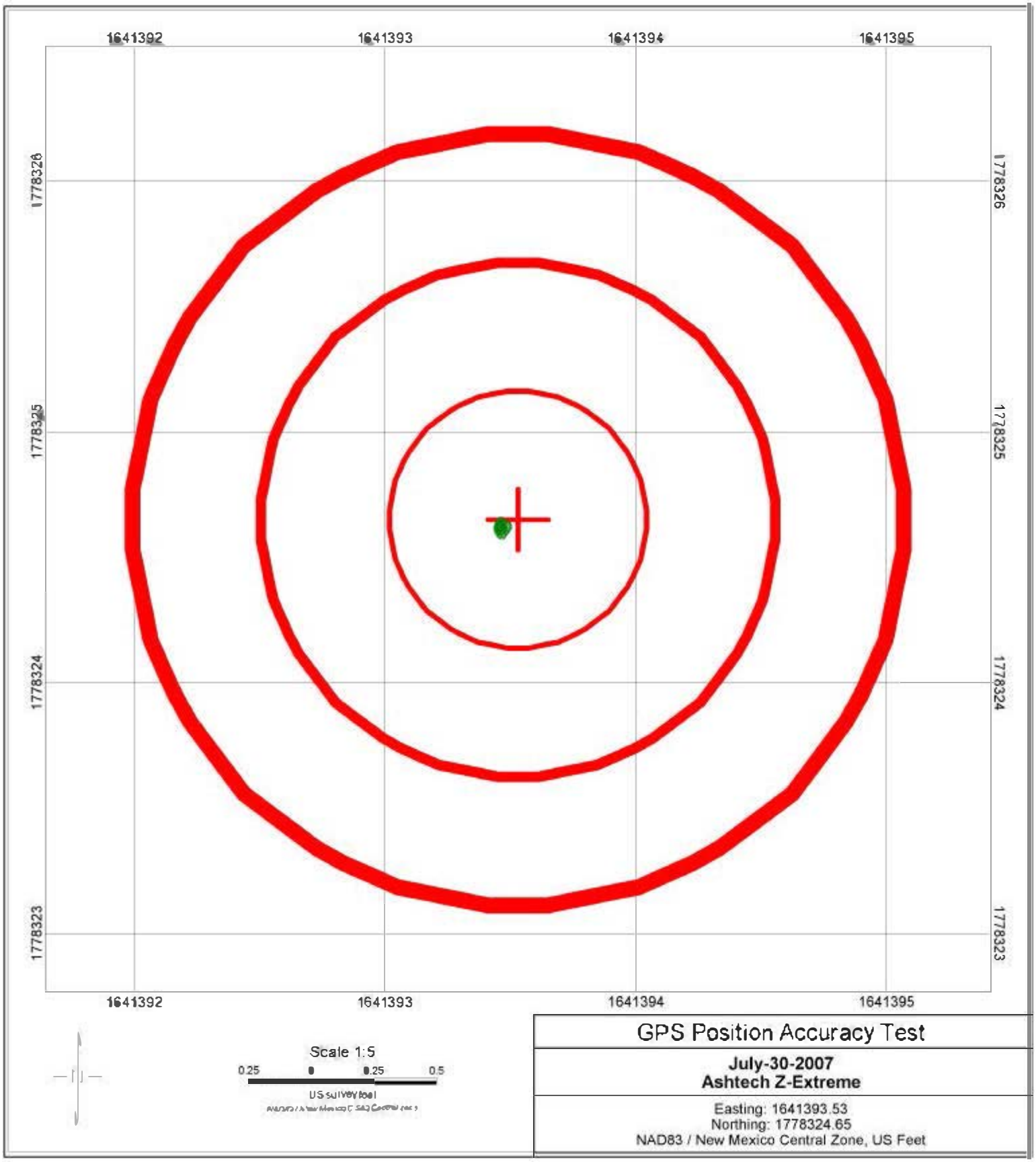
Easting: 1641393.53
Northing: 1778324.65
NAD83 / New Mexico Central Zone, US Feet



GPS Position Accuracy Test

July-31-2007
Ashtech Z-Extreme

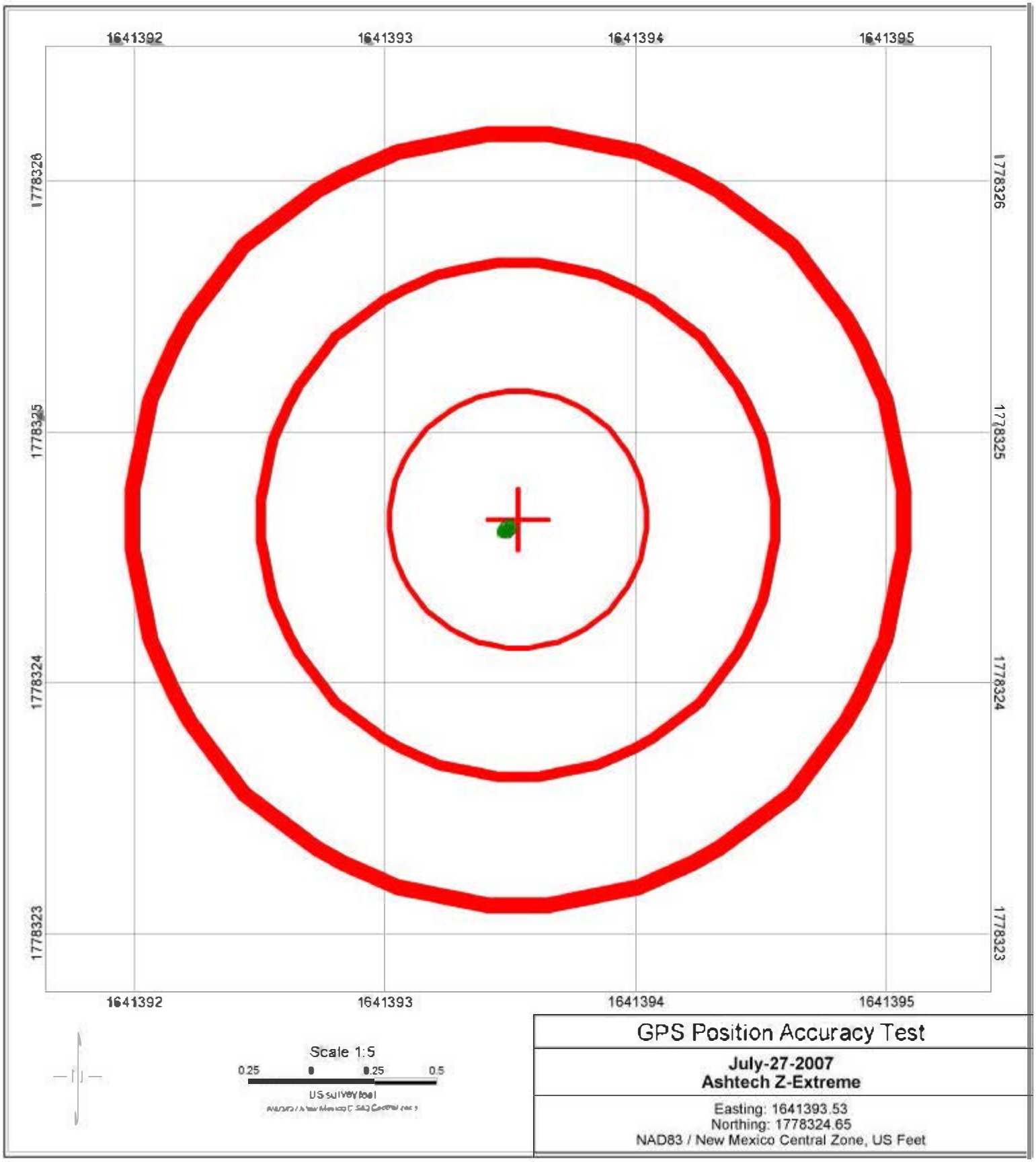
Easting: 1641393.53
Northing: 1778324.65
NAD83 / New Mexico Central Zone, US Feet



GPS Position Accuracy Test

July-30-2007
Ashtech Z-Extreme

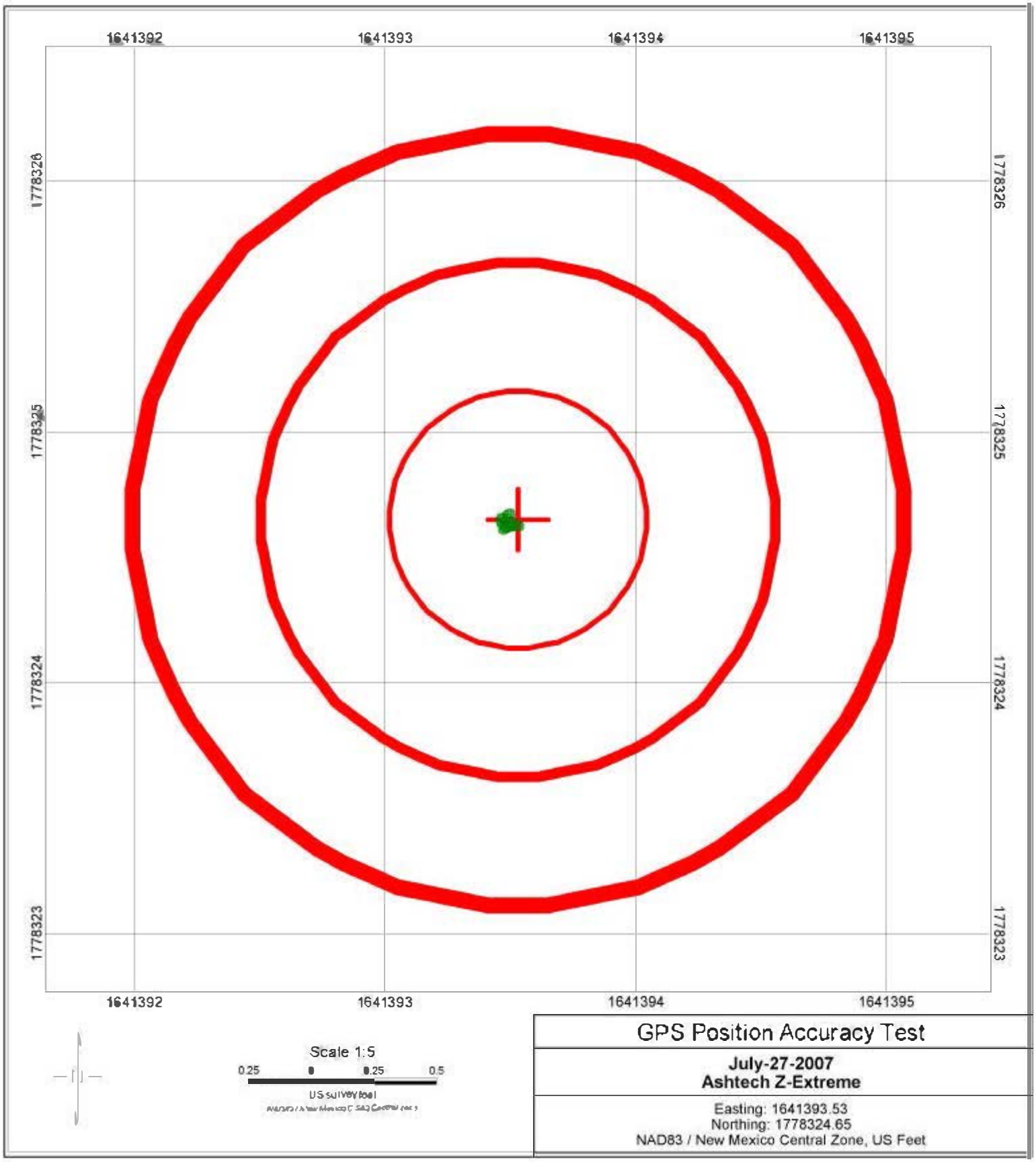
Easting: 1641393.53
Northing: 1778324.65
NAD83 / New Mexico Central Zone, US Feet



GPS Position Accuracy Test

July-27-2007
Ashtech Z-Extreme

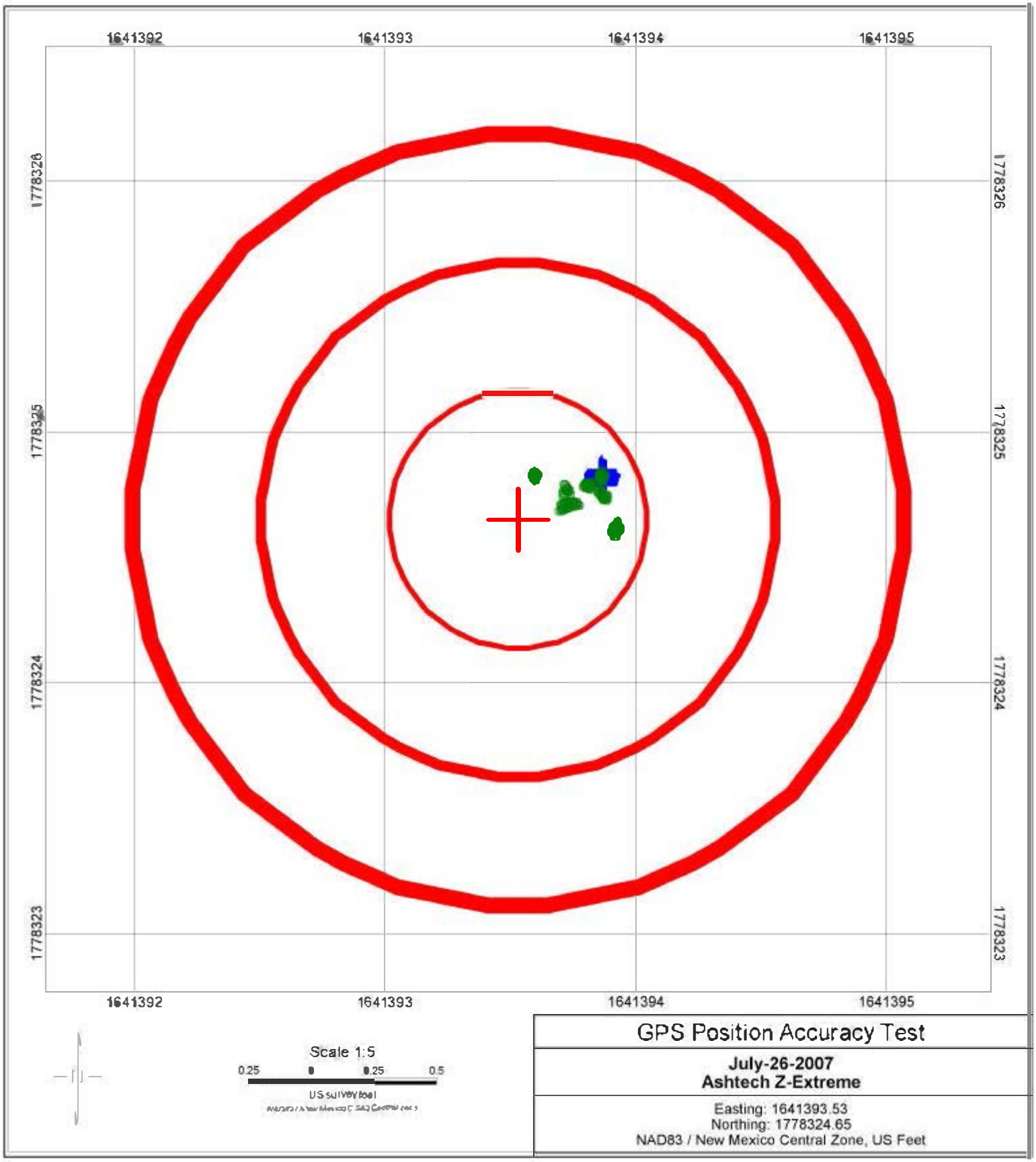
Easting: 1641393.53
Northing: 1778324.65
NAD83 / New Mexico Central Zone, US Feet



GPS Position Accuracy Test

July-27-2007
Ashtech Z-Extreme

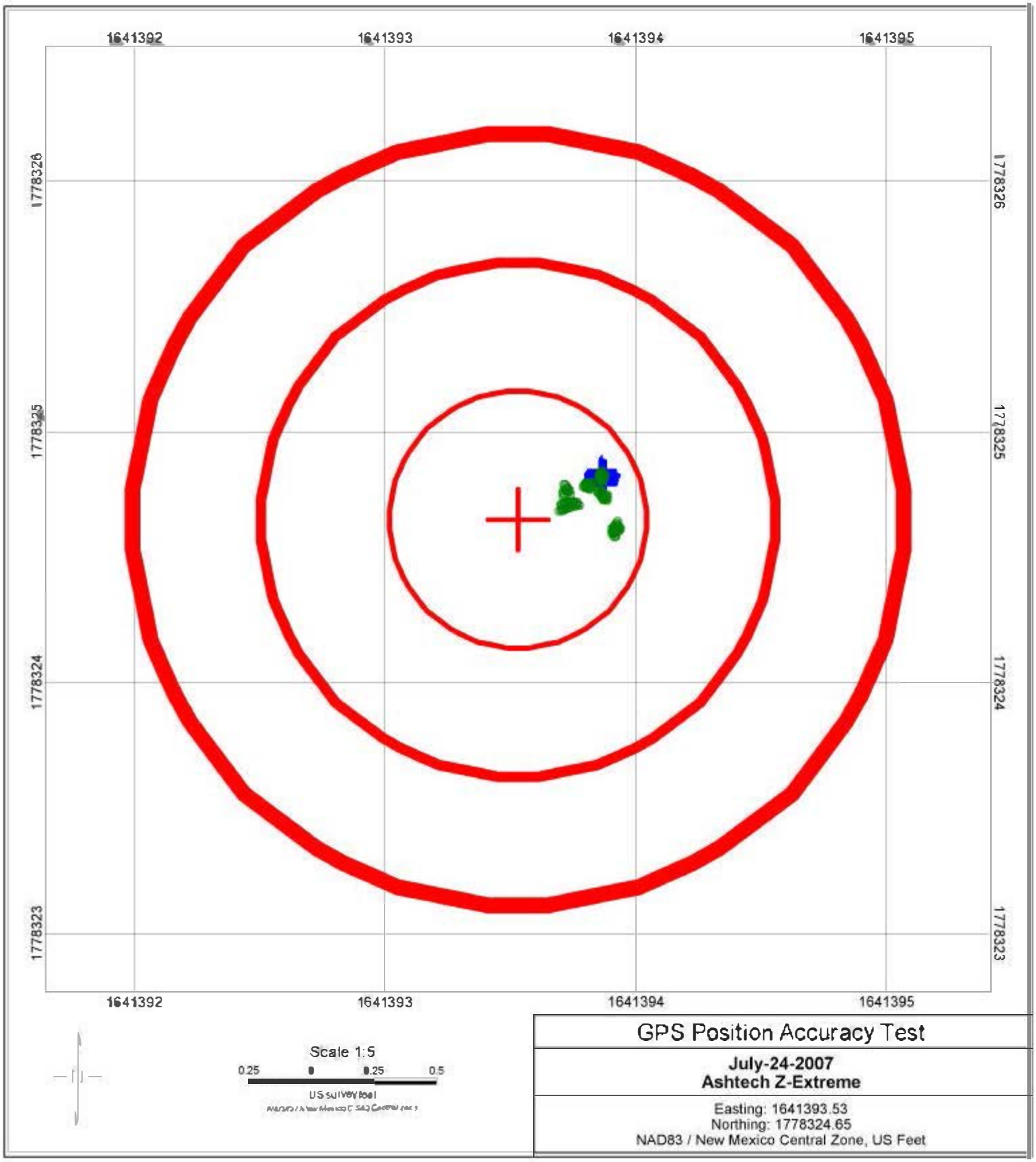
Easting: 1641393.53
Northing: 1778324.65
NAD83 / New Mexico Central Zone, US Feet



GPS Position Accuracy Test

July-26-2007
Ashtech Z-Extreme

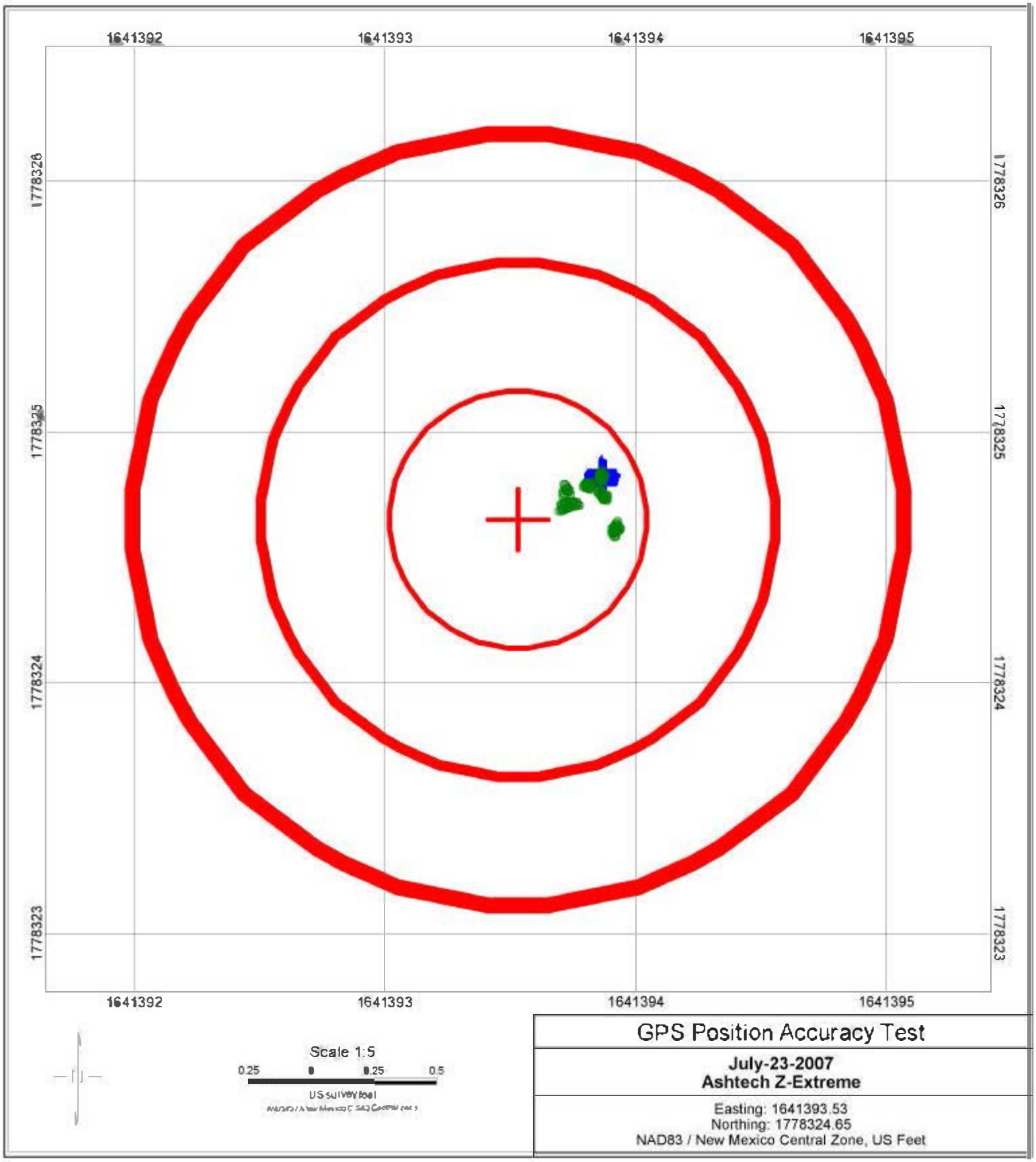
Easting: 1641393.53
Northing: 1778324.65
NAD83 / New Mexico Central Zone, US Feet



GPS Position Accuracy Test

July-24-2007
Ashtech Z-Extreme

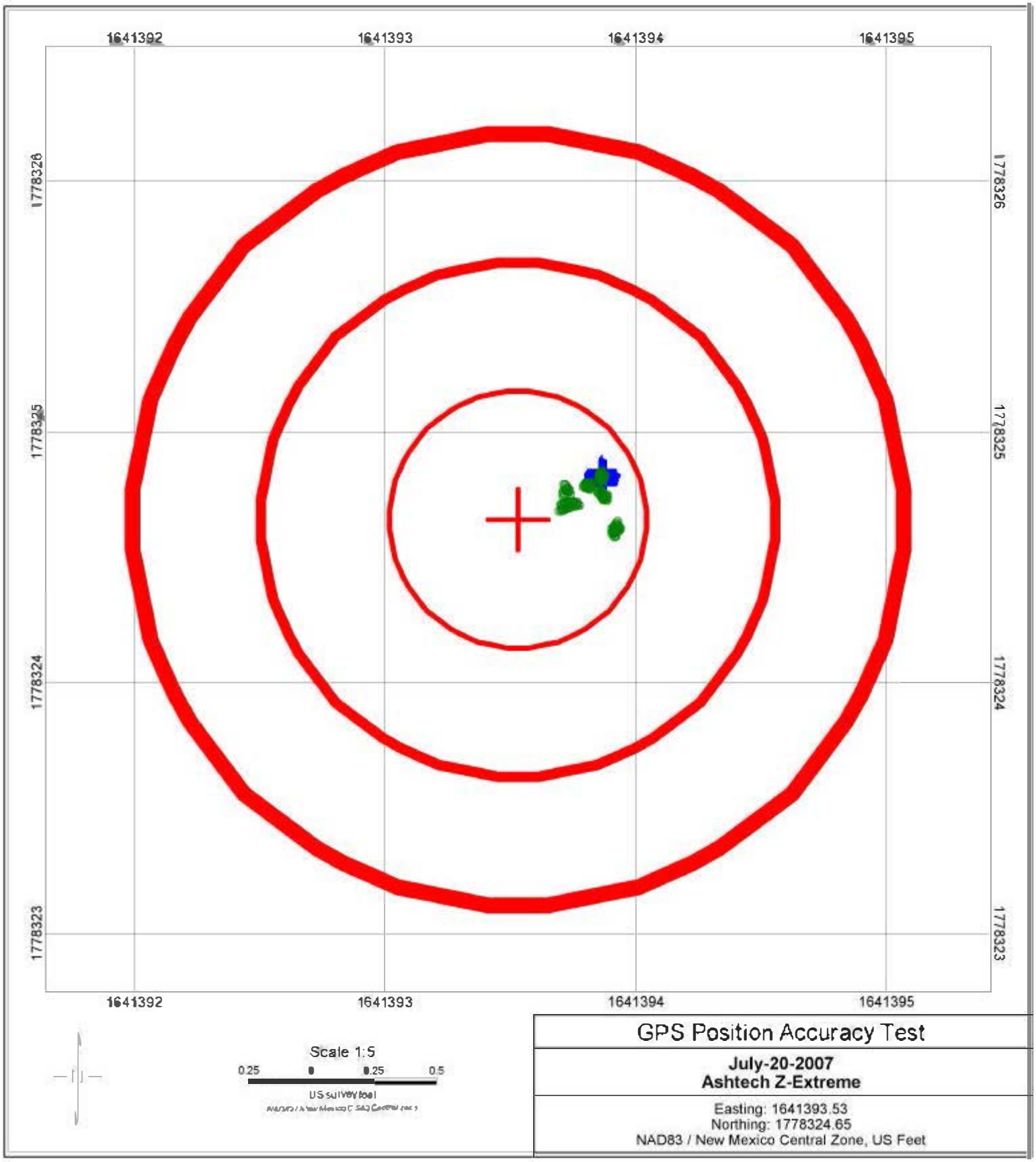
Easting: 1641393.53
Northing: 1778324.65
NAD83 / New Mexico Central Zone, US Feet



GPS Position Accuracy Test

July-23-2007
Ashtech Z-Extreme

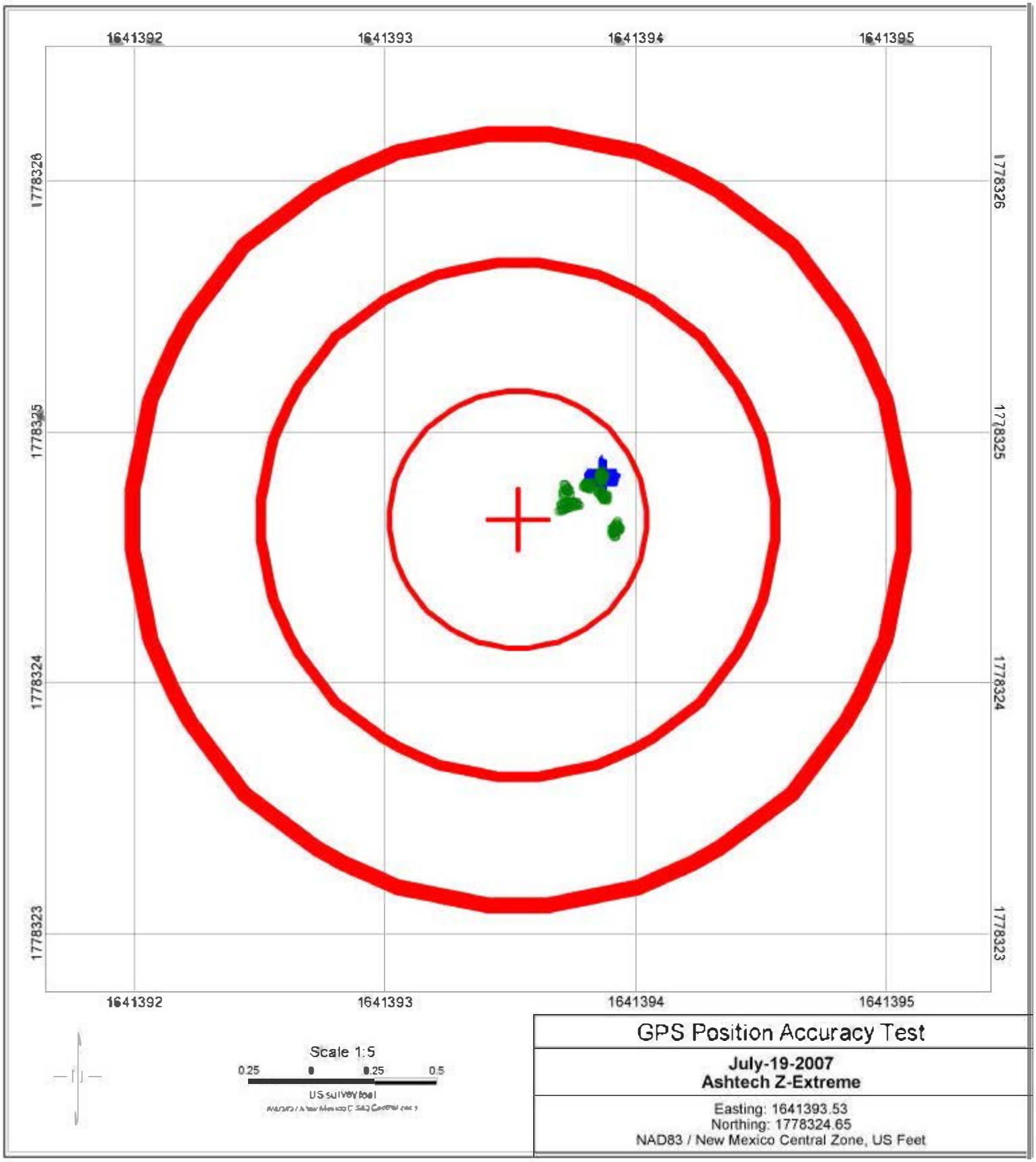
Easting: 1641393.53
Northing: 1778324.65
NAD83 / New Mexico Central Zone, US Feet



GPS Position Accuracy Test

July-20-2007
Ashtech Z-Extreme

Easting: 1641393.53
Northing: 1778324.65
NAD83 / New Mexico Central Zone, US Feet

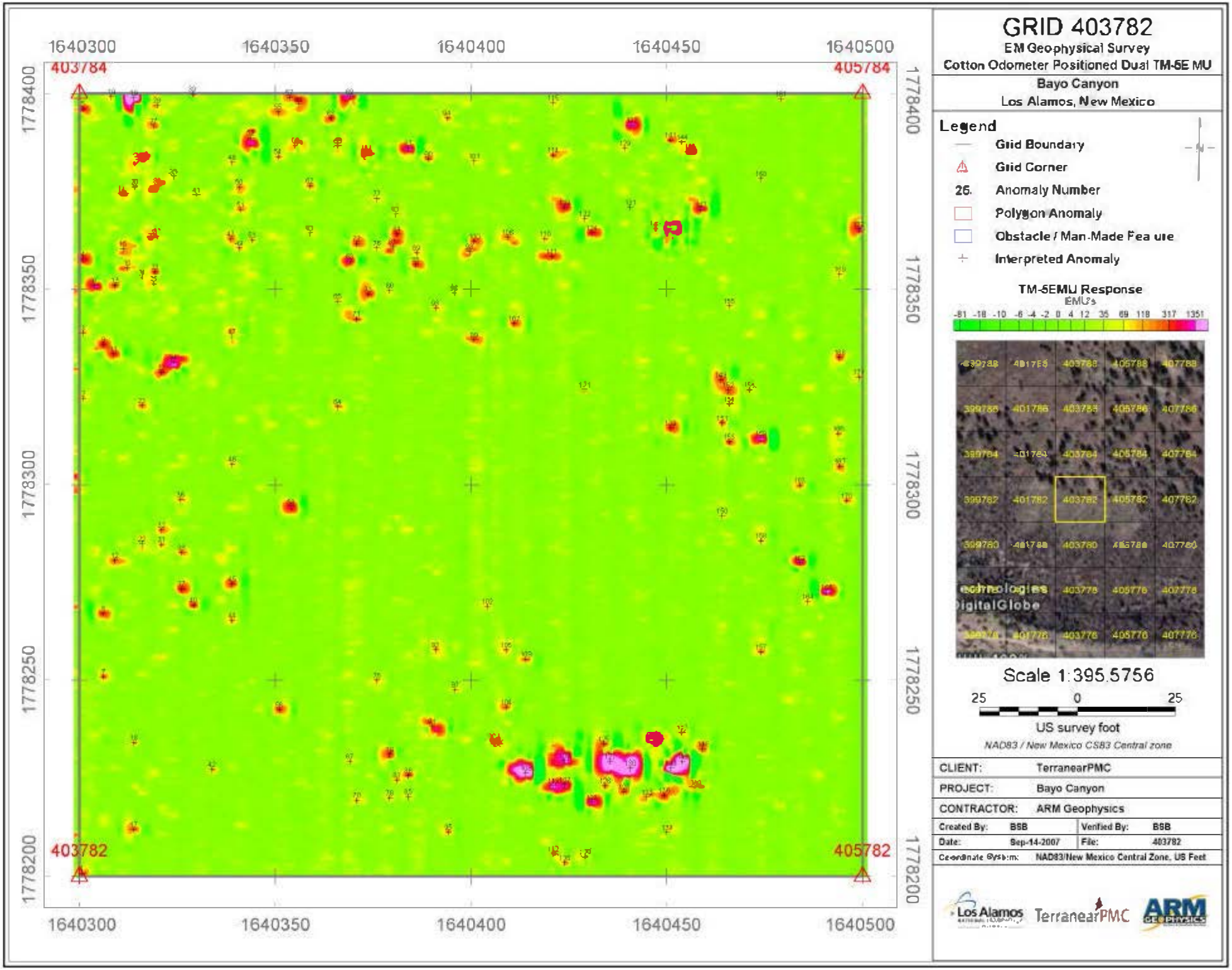


GPS Position Accuracy Test

July-19-2007
Ashtech Z-Extreme

Easting: 1641393.53
Northing: 1778324.65
NAD83 / New Mexico Central Zone, US Feet

APPENDIX C. INDIVIDUAL GRID-BASED MAP IMAGES FOR THE TM5EMU DATA COLLECTION



GRID 403782

EM Geophysical Survey

Cotton Odometer Positioned Dual TM-6E MU

Bayo Canyon

Los Alamos, New Mexico

Legend

- Grid Boundary
- Grid Corner
- 26 Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-6EMU Response

EMUs

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351

Scale 1:395.5756

25 0 25

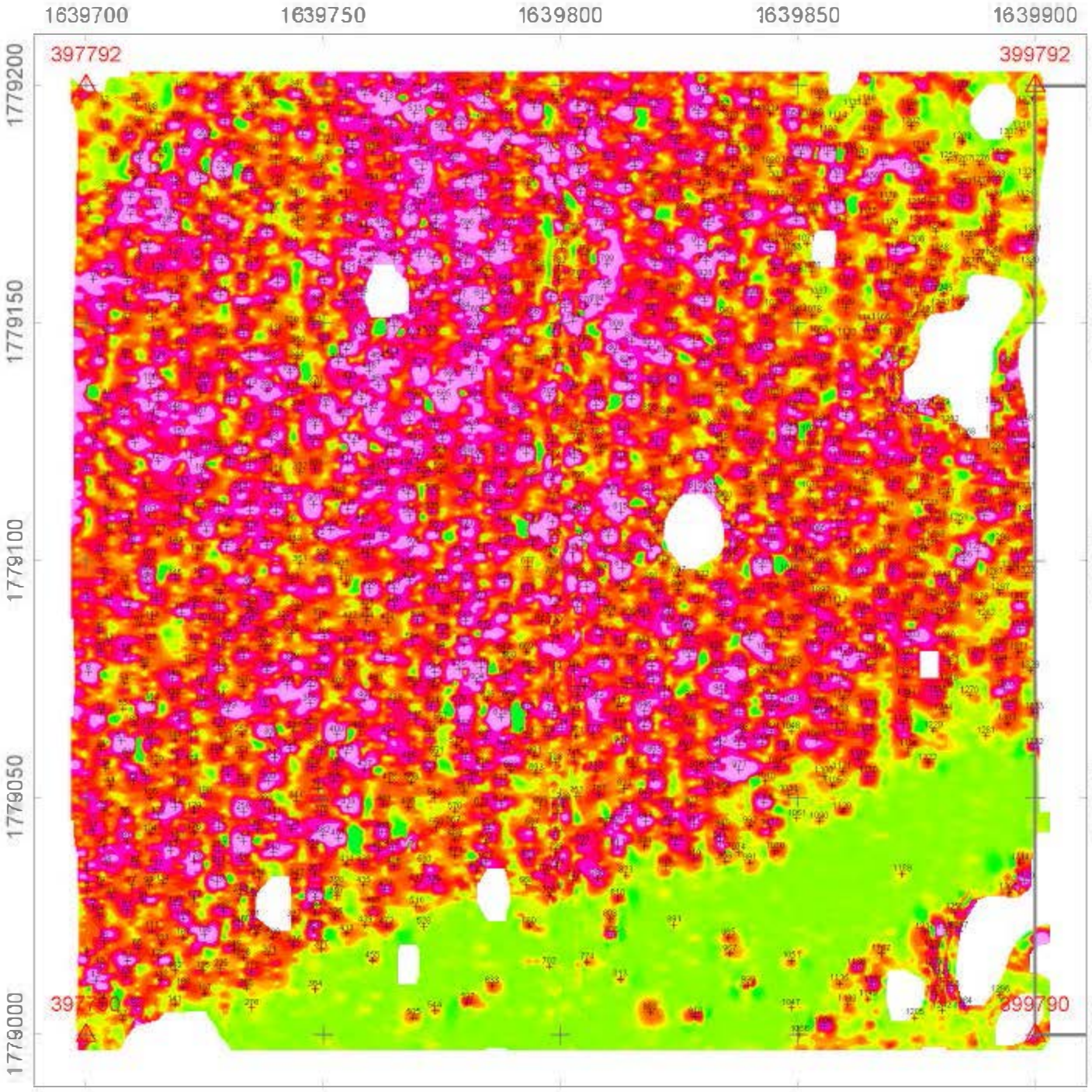
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	BSB	Verified By:	BSB
Date:	Sep-14-2007	File:	403782
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos TerranearPMC ARM GEOPHYSICS



GRID 397790

EM Geophysical Survey

GPS Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

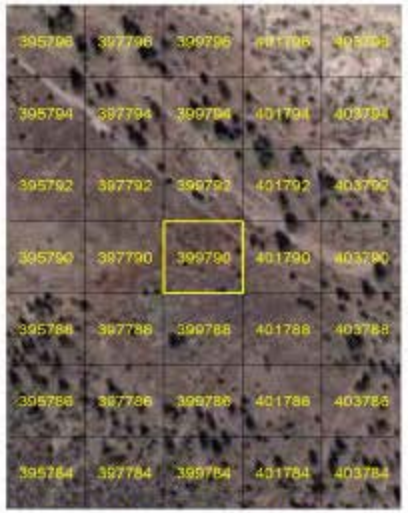
Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:402.6185

25 0 25

US survey foot

NAD83 / New Mexico CS83 Central zone

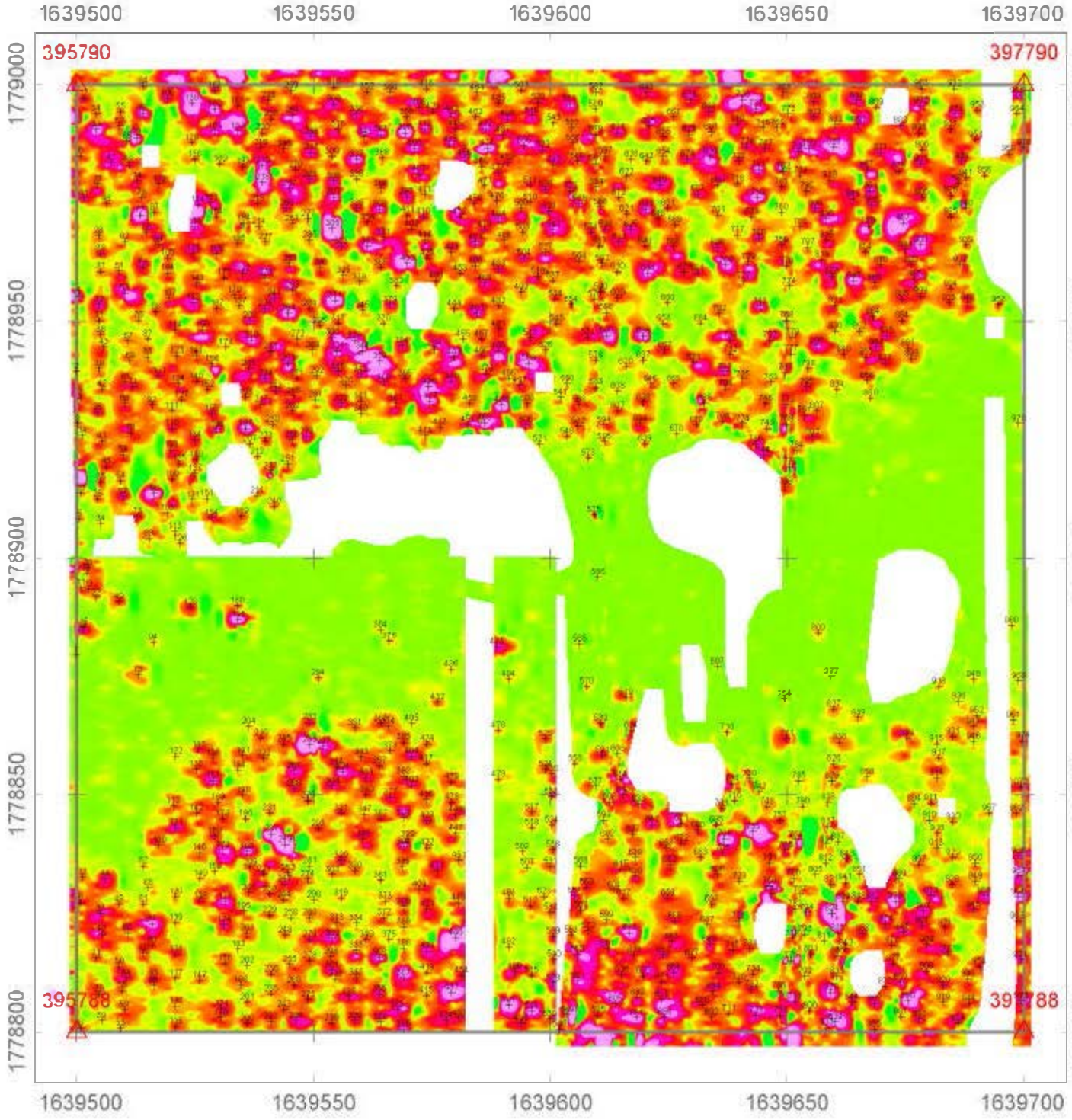
CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Jul-30-2007	File:	399790
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY

TerranearPMC

ARM GEOPHYSICS



GRID 395788

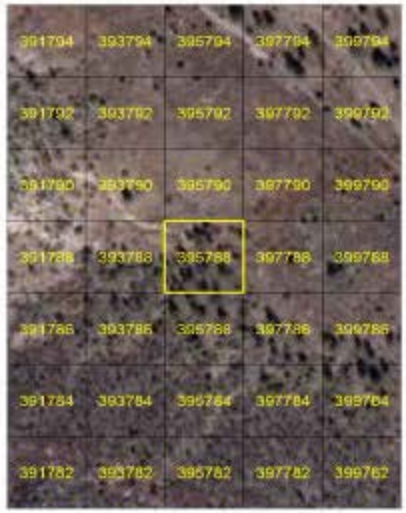
EM Geophysical Survey
GPS Positioned Dual TM-5EMU
Bayo Canyon
Los Alamos, New Mexico

Legend

- Grid Boundary
- Grid Corner
- 26 Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response
EMUs

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:395.5756

25 0 25

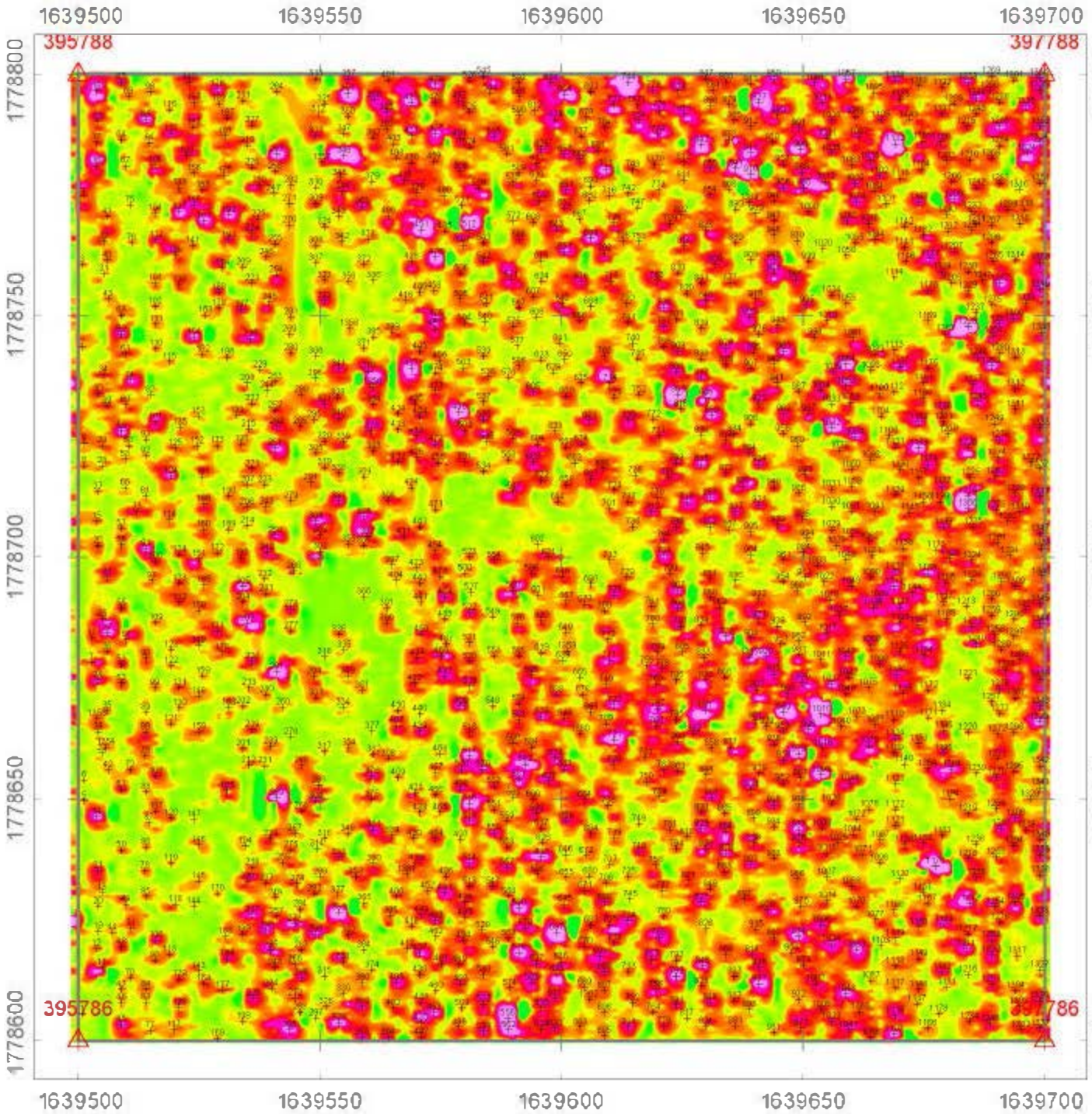
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	BSB	Verified By:	BSB
Date:	Sep-15-2007	File:	395788
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos TerranearPMC ARM GEOPHYSICS



GRID 395786

EM Geophysical Survey

Cotton Odometer Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

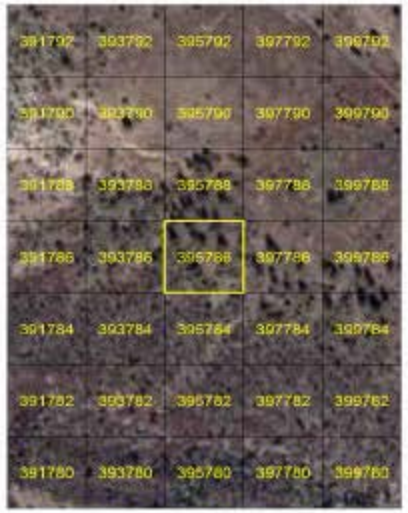
Legend

- Grid Boundary
- Grid Corner
- 26. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMUs

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:395.5756

25 0 25

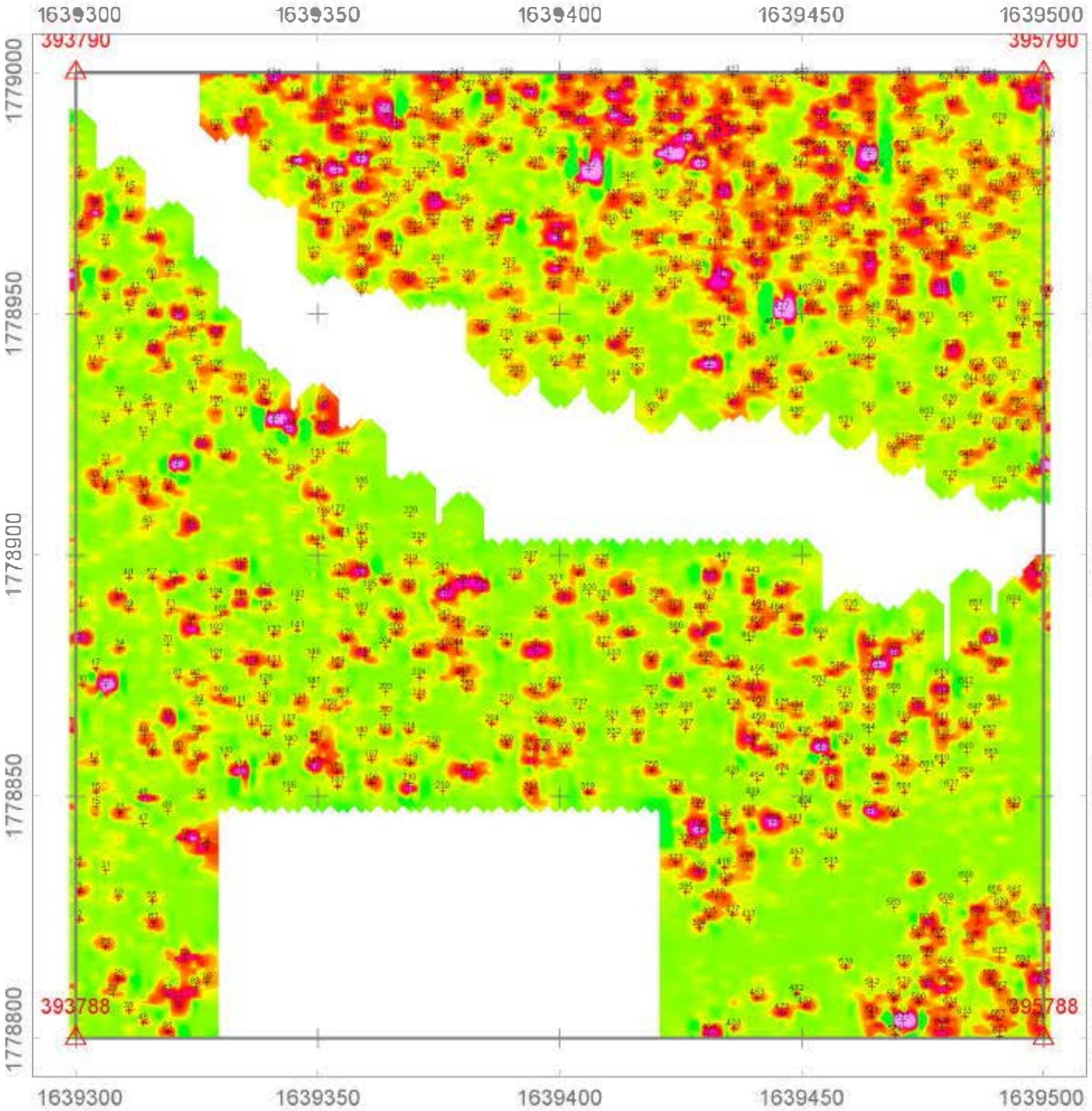
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	BBB	Verified By:	BSB
Date:	Sep-14-2007	File:	395786
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos TerranearPMC ARM GEOPHYSICS



GRID 393788

EM Geophysical Survey

Colton Odometer Positioned Dual TM-6EMU

Bayo Canyon

Los Alamos, New Mexico

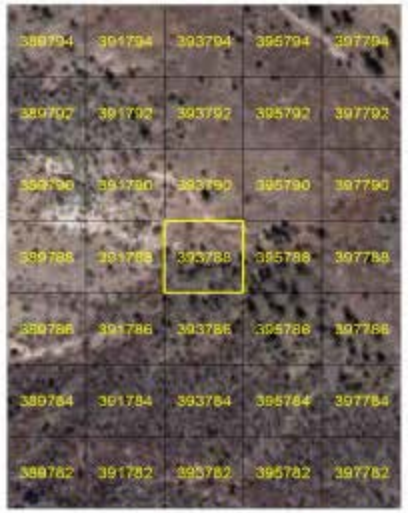
Legend

- Grid Boundary
- Grid Corner
- 25 Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-6EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:395.5756

25 0 25

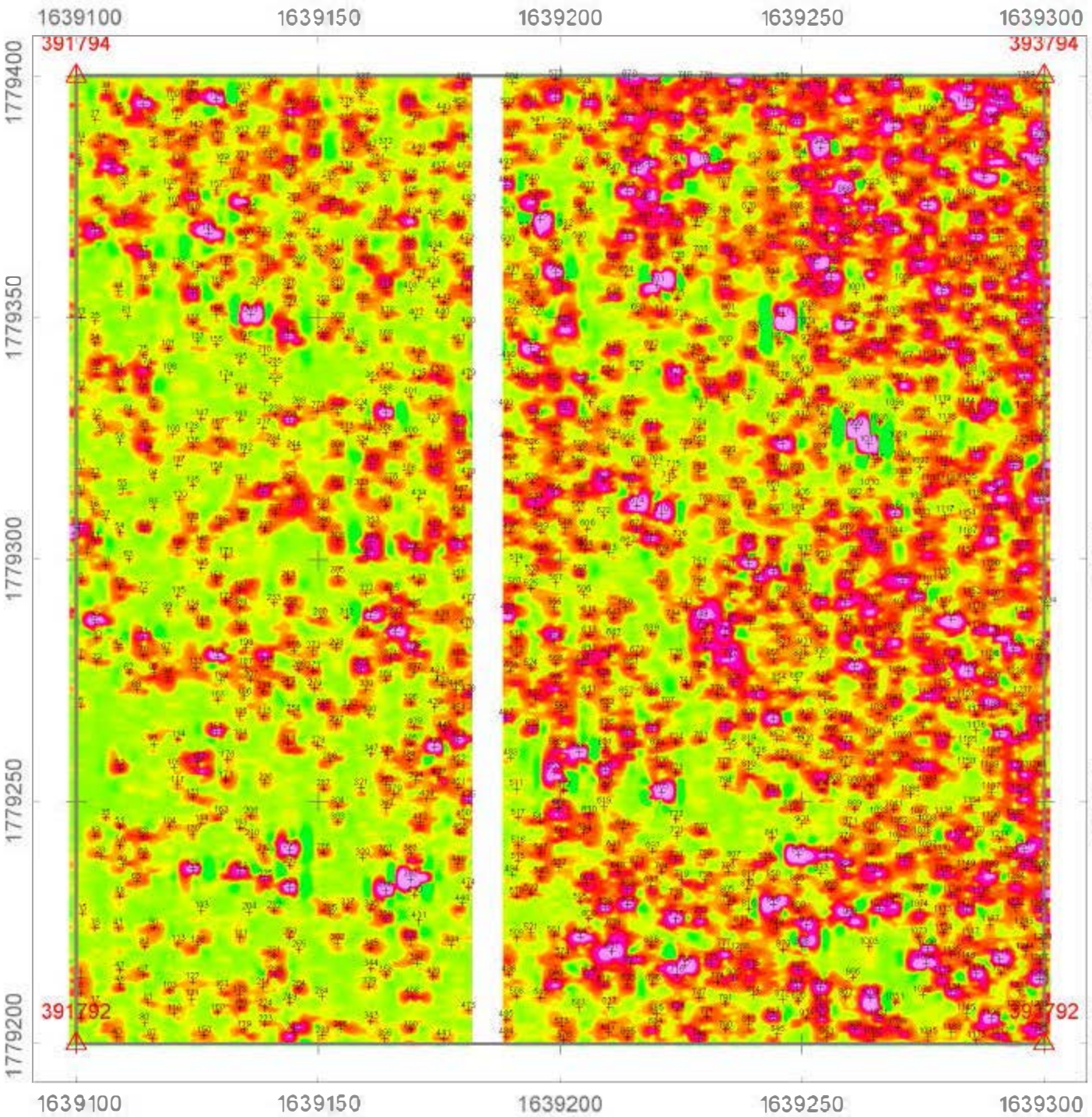
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	BSB	Verified By:	BSB
Date:	Sep-16-2007	File:	393788
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos TerranearPMC ARM GEOPHYSICS



GRID 391792

EM Geophysical Survey

Cotton Odometer Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

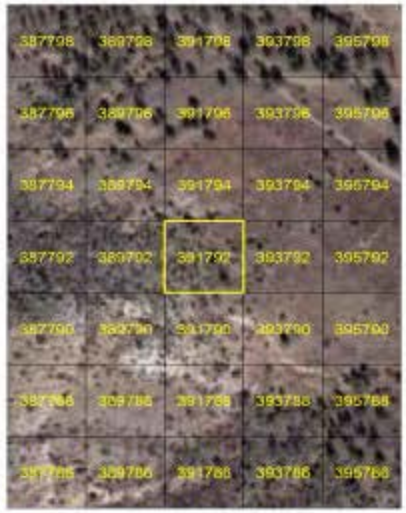
Legend

- Grid Boundary
- Grid Corner
- 26. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:395.5756

25 0 25

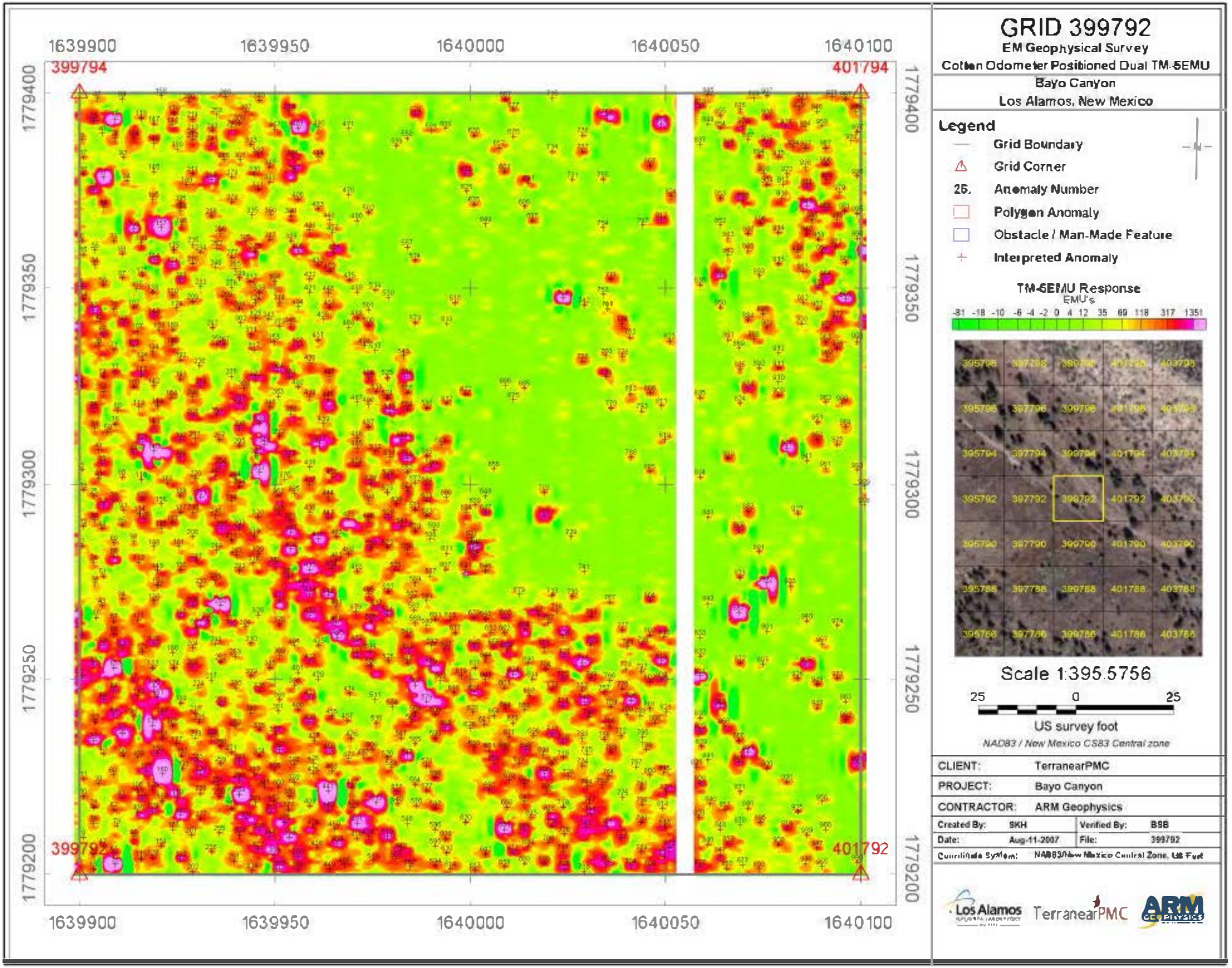
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	BSB	Verified By:	BSB
Date:	Sep-16-2007	File:	391792
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY TerranearPMC ARM GEOPHYSICS



GRID 399792

EM Geophysical Survey

Cotton Odometer Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351

Scale 1:395.5756

25 0 25

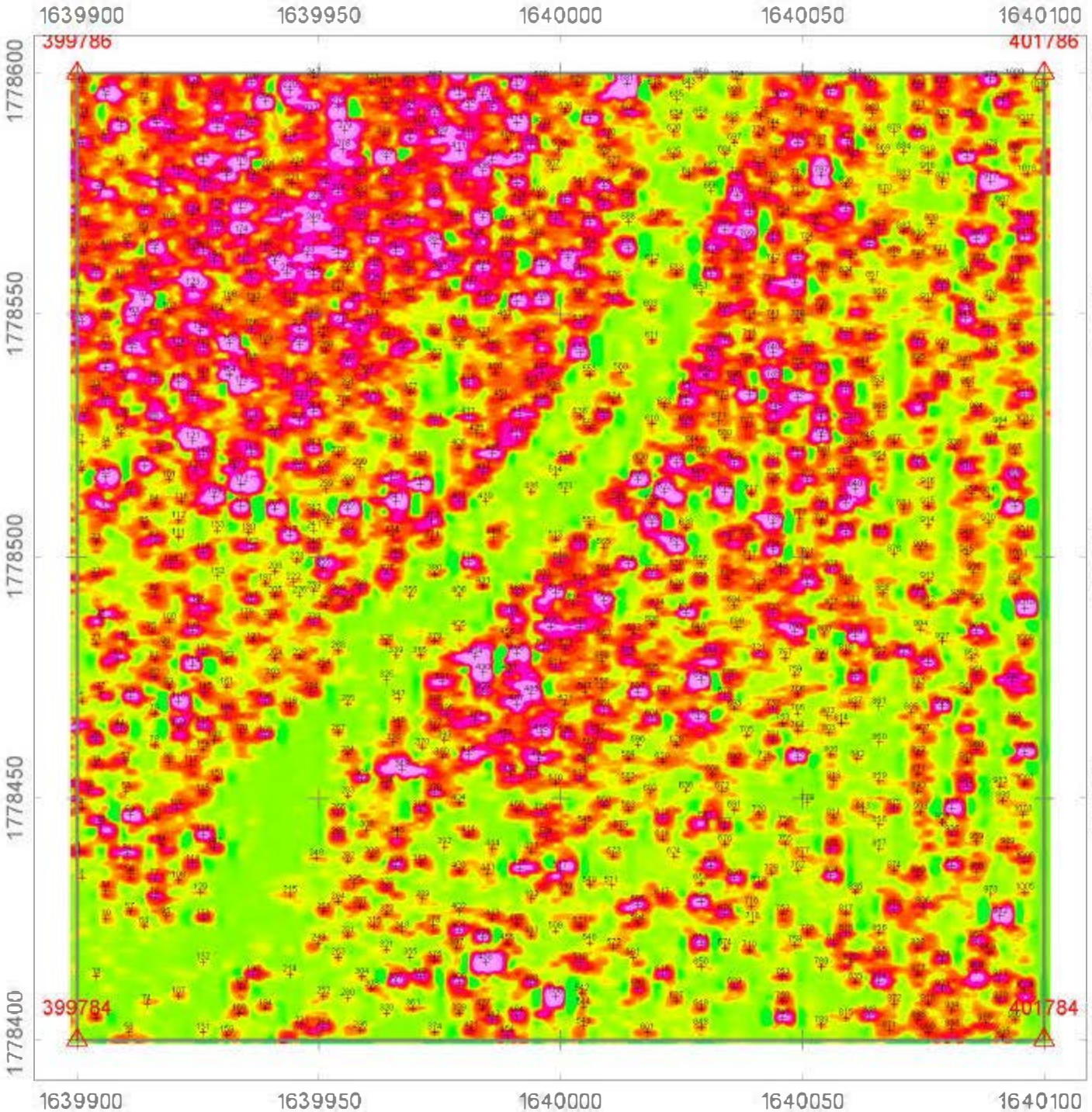
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-11-2007	File:	399792
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos TerranearPMC ARM GEOPHYSICS



GRID 399784

EM Geophysical Survey

Cotton Odometer Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

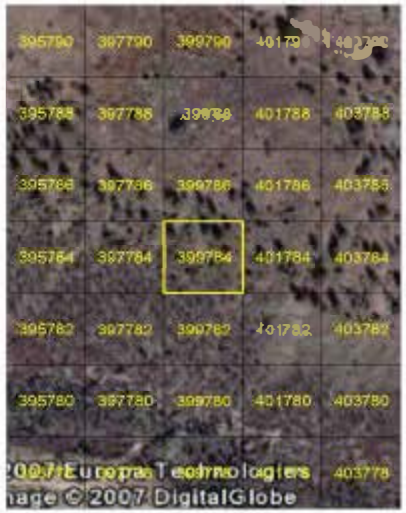
Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-6EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:395.1844

25 0 25

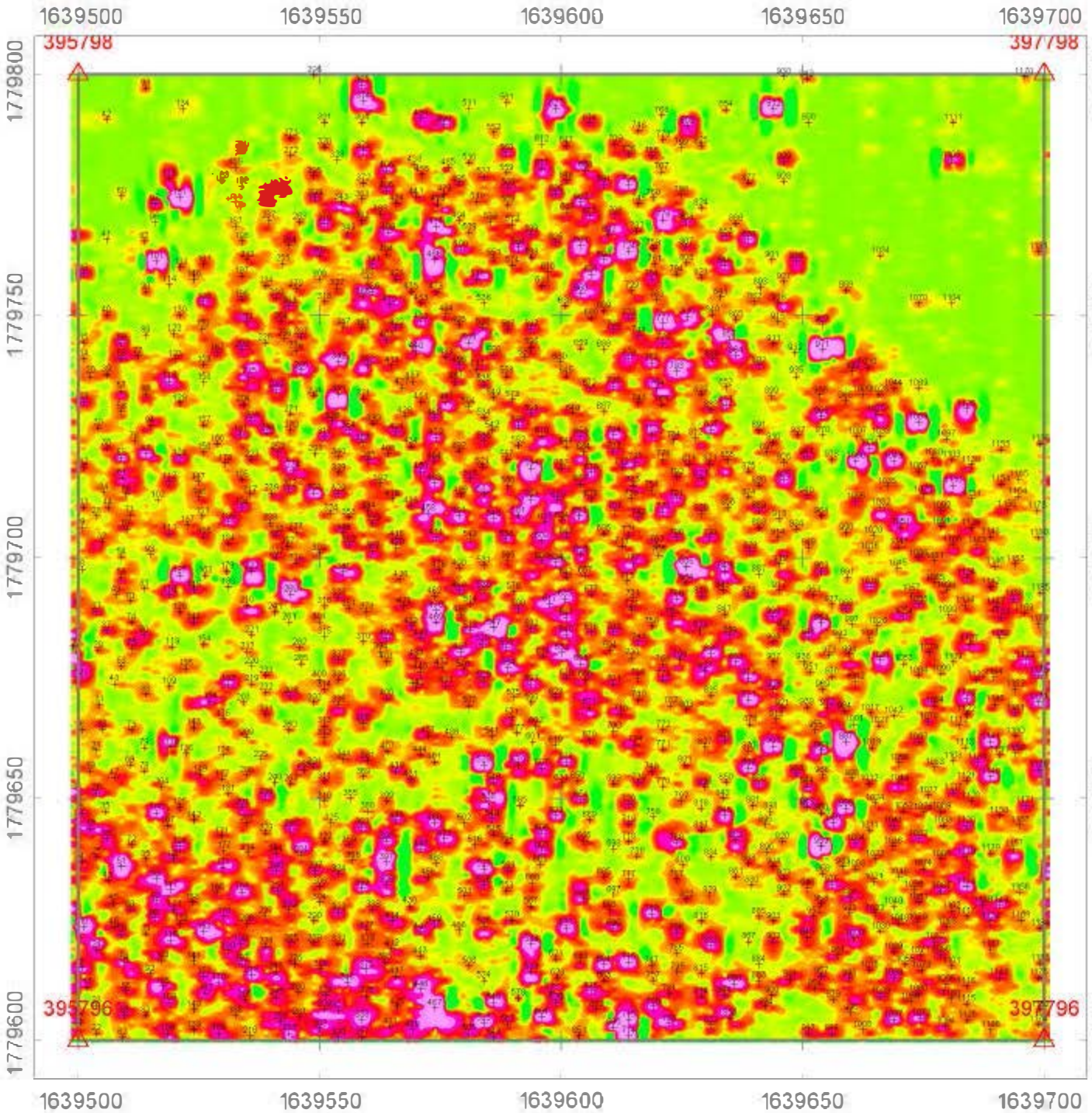
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-9-2007	File:	399784
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY EST. 1943 TerranearPMC ARM GEOPHYSICS



GRID 395796

EM Geophysical Survey

Cotton Odometer Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

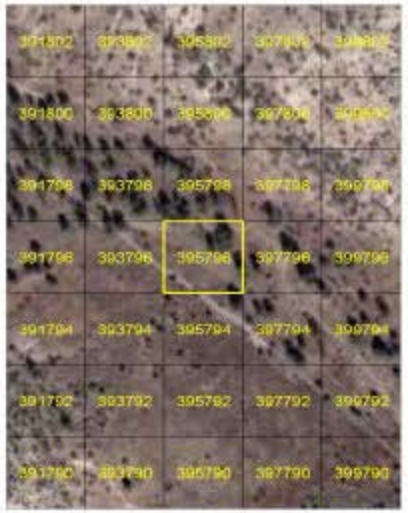
Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:395.5756

25 0 25

US survey foot

NAD83 / New Mexico CS83 Central zone

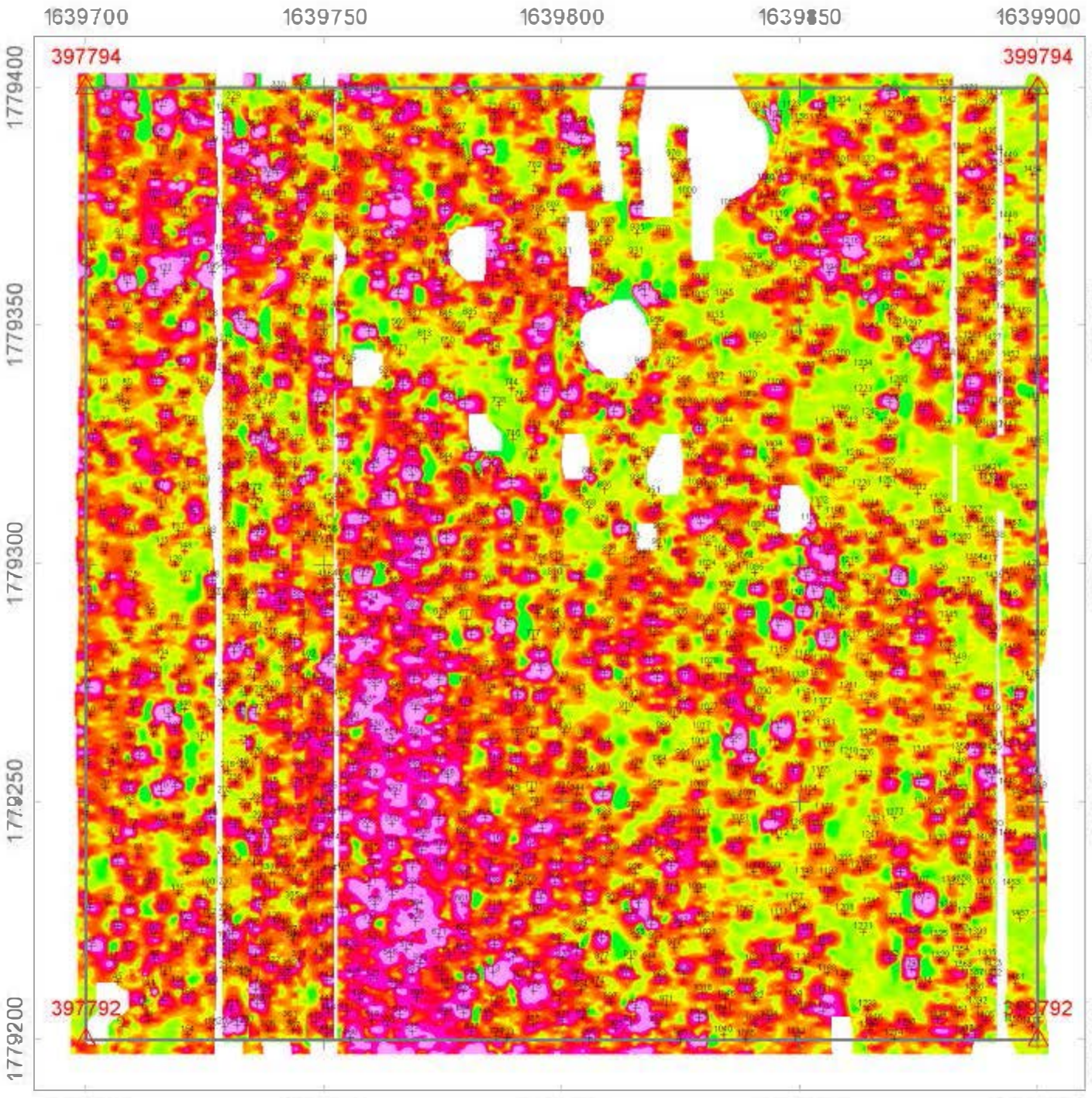
CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-11-2007	File:	395796
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

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TerranearPMC

ARM GEOPHYSICS



GRID 397792

EM Geophysical Survey

GPS Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

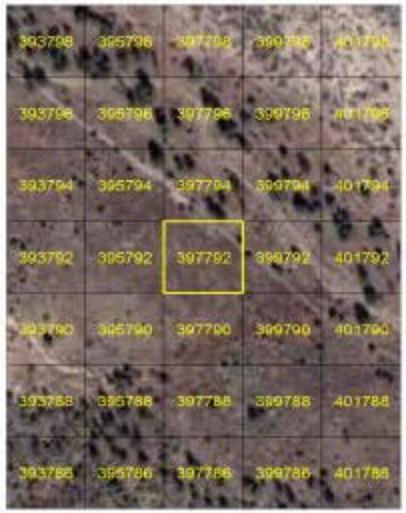
Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:400.8578

25 0 25

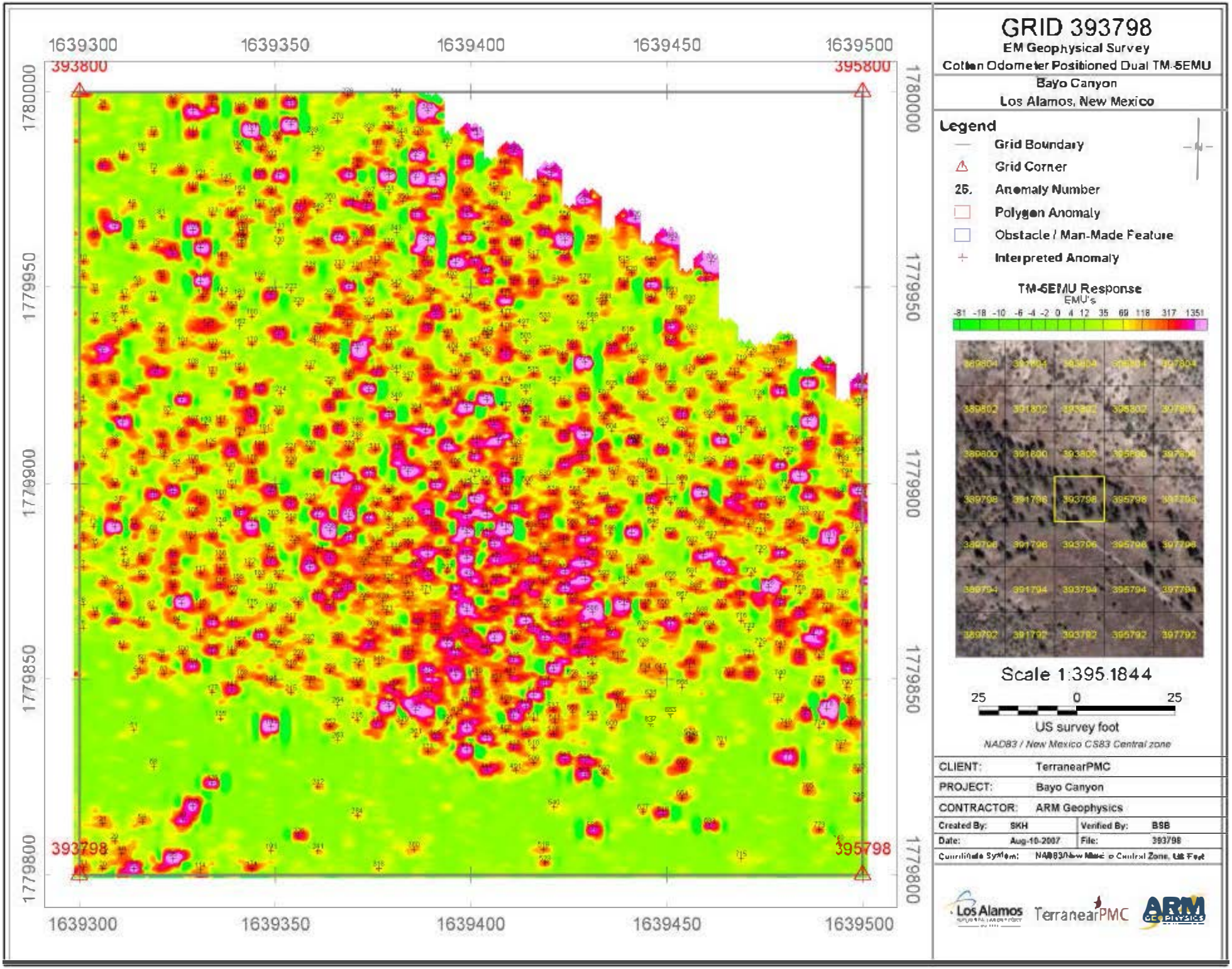
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-1-2007	File:	397792
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY TerranearPMC ARM GEOPHYSICS



GRID 393798

EM Geophysical Survey

Cotton Odometer Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351

Scale 1:395.1844

25 0 25

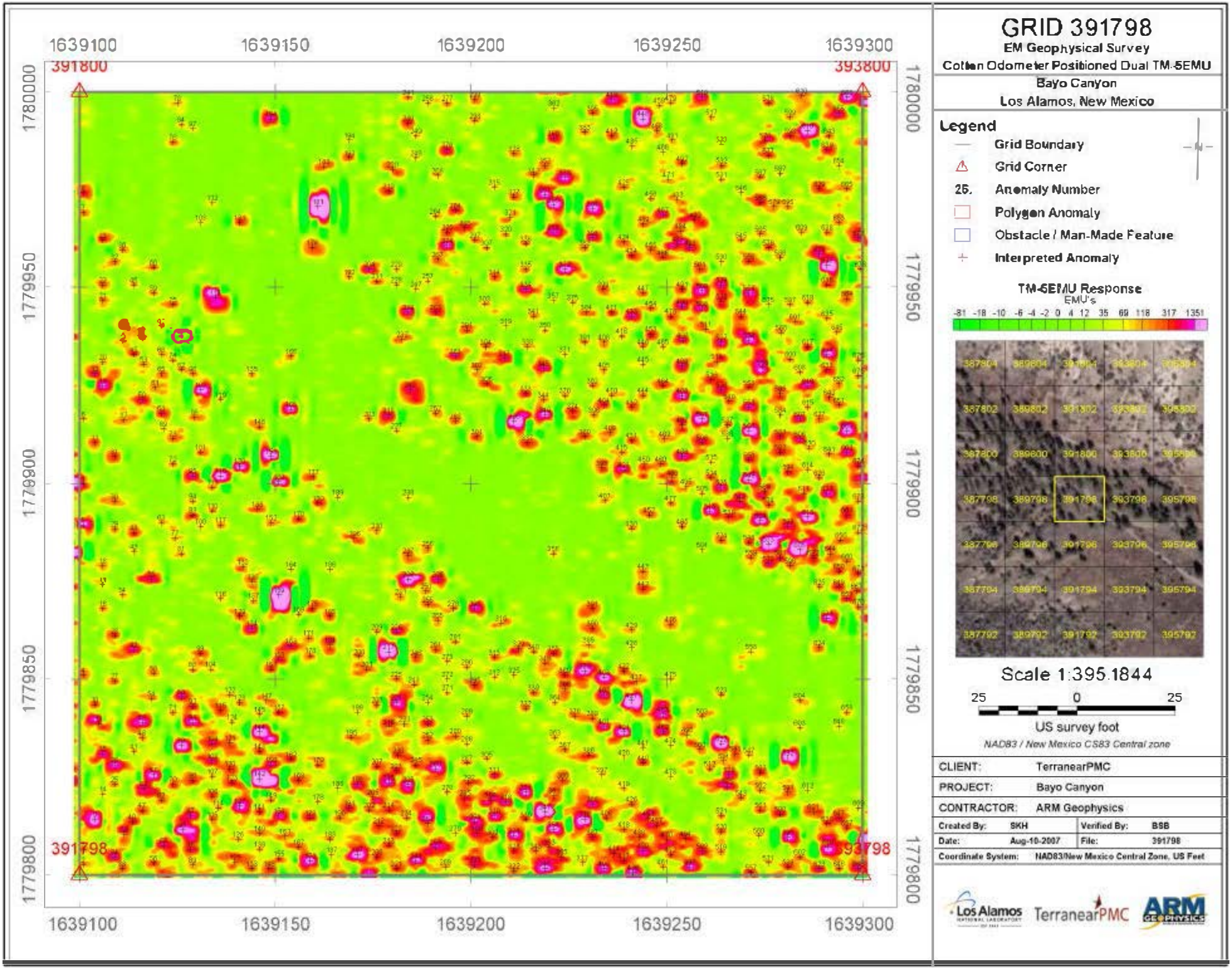
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-10-2007	File:	393798
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos TerranearPMC ARM GEOPHYSICS



GRID 391798

EM Geophysical Survey

Cotton Odometer Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351

Scale 1:395.1844

25 0 25

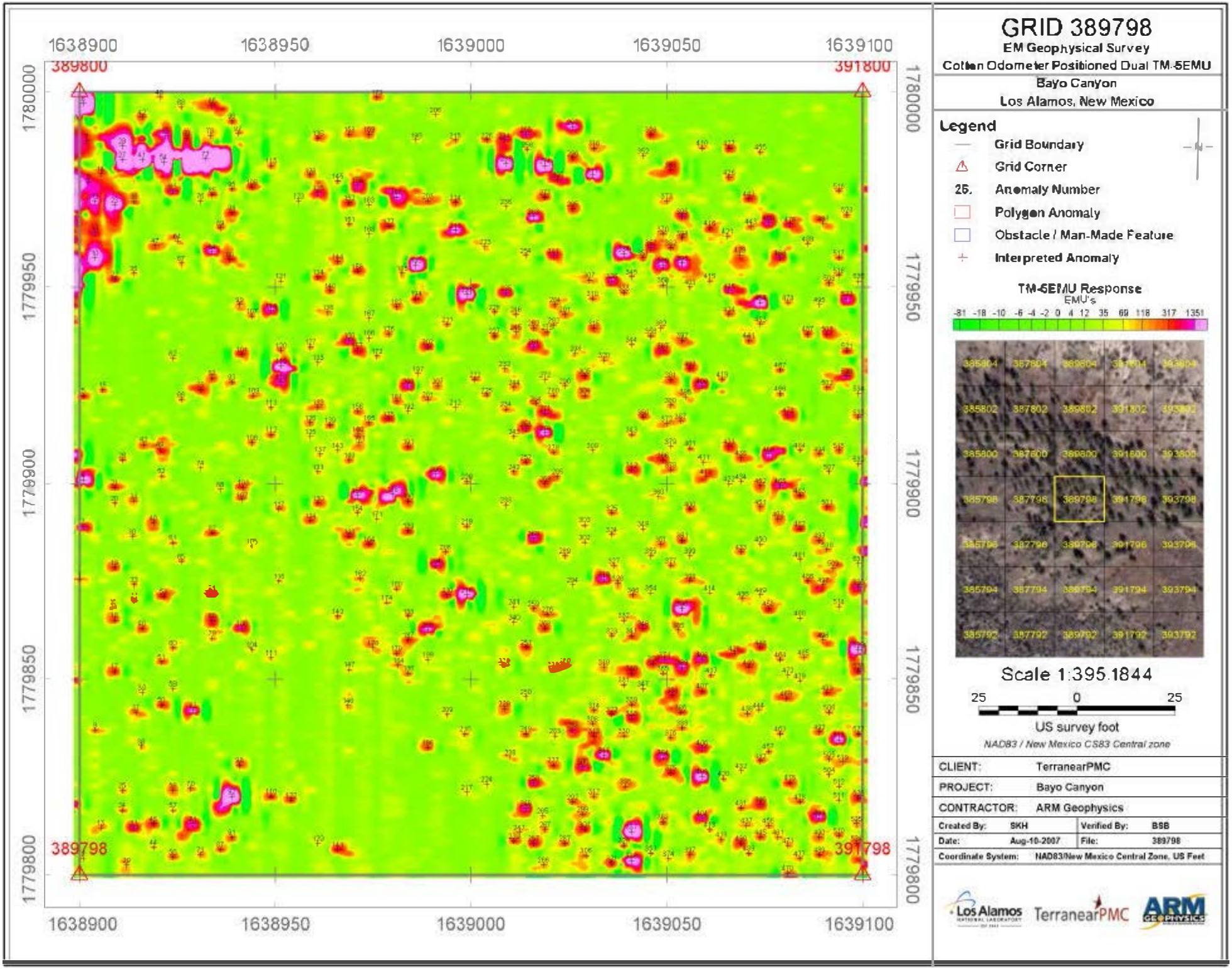
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-10-2007	File:	391798
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY EST. 1943 TerranearPMC ARM GEOPHYSICS



GRID 389798

EM Geophysical Survey

Cotton Odometer Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351

Scale 1:395.1844

25 0 25

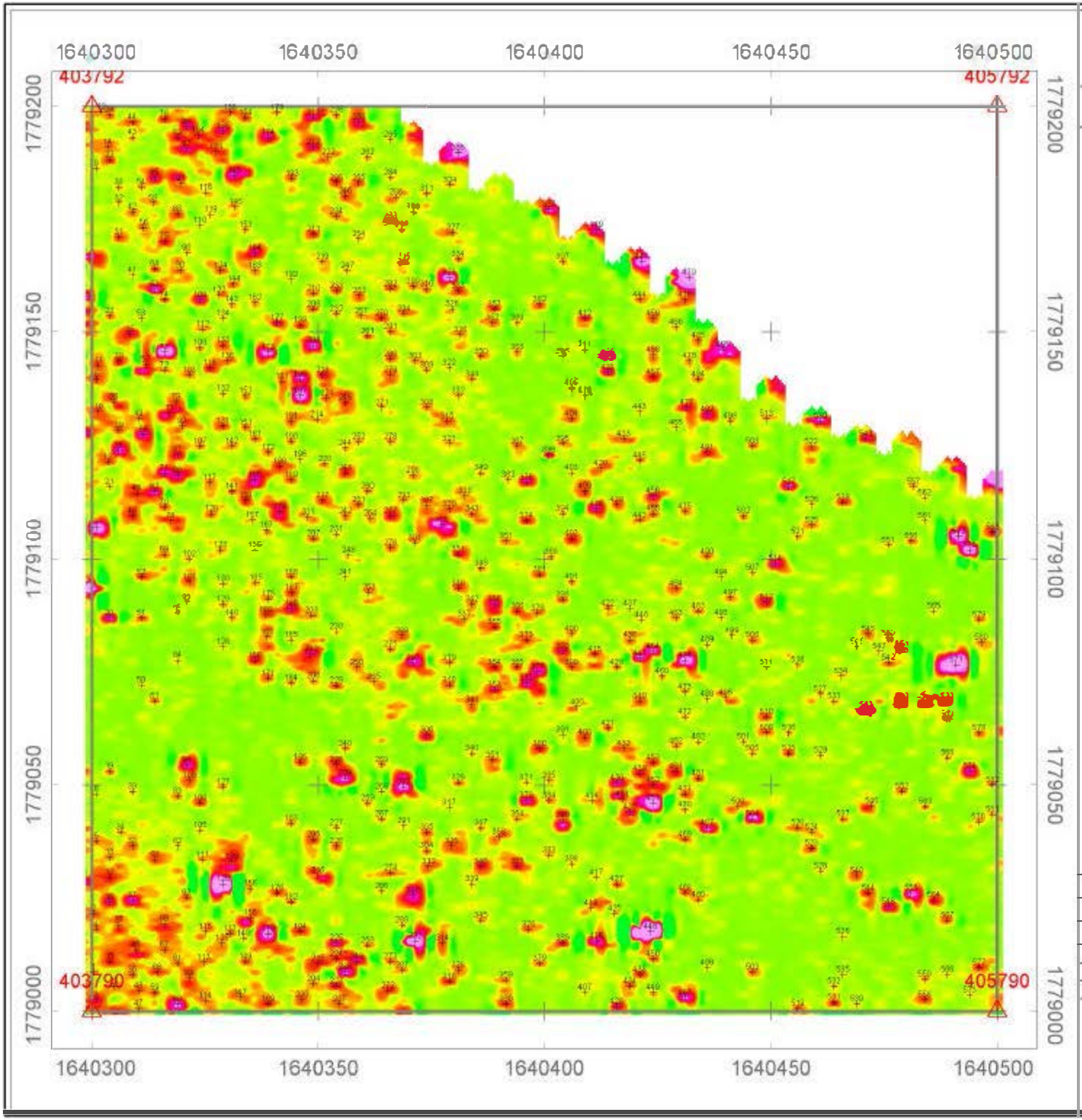
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-10-2007	File:	389798
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY TerranearPMC ARM GEOPHYSICS



GRID 403790

EM Geophysical Survey

GPS Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

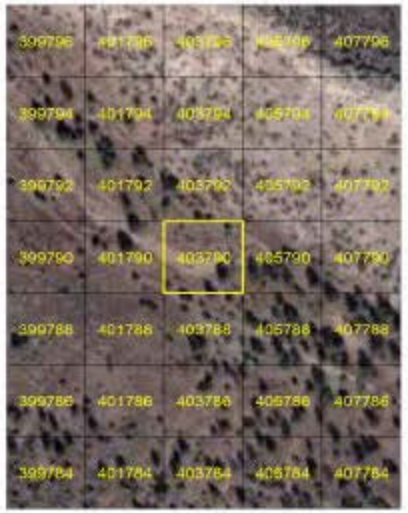
Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:395.1844

25 0 25

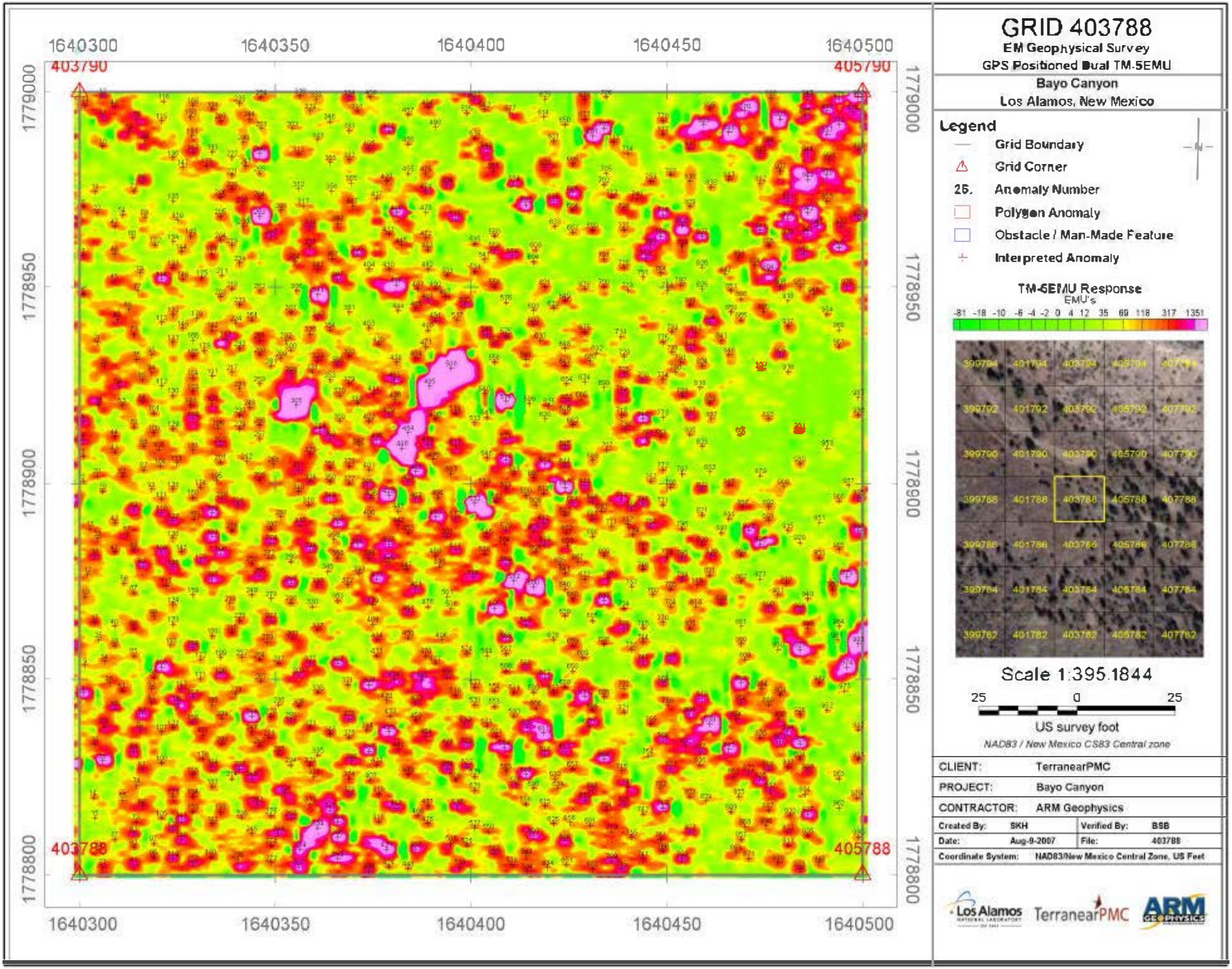
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-9-2007	File:	403790
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY EST. 1943 TerranearPMC ARM GEOPHYSICS



GRID 403788

EM Geophysical Survey

GPS Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351

Scale 1:395.1844

25 0 25

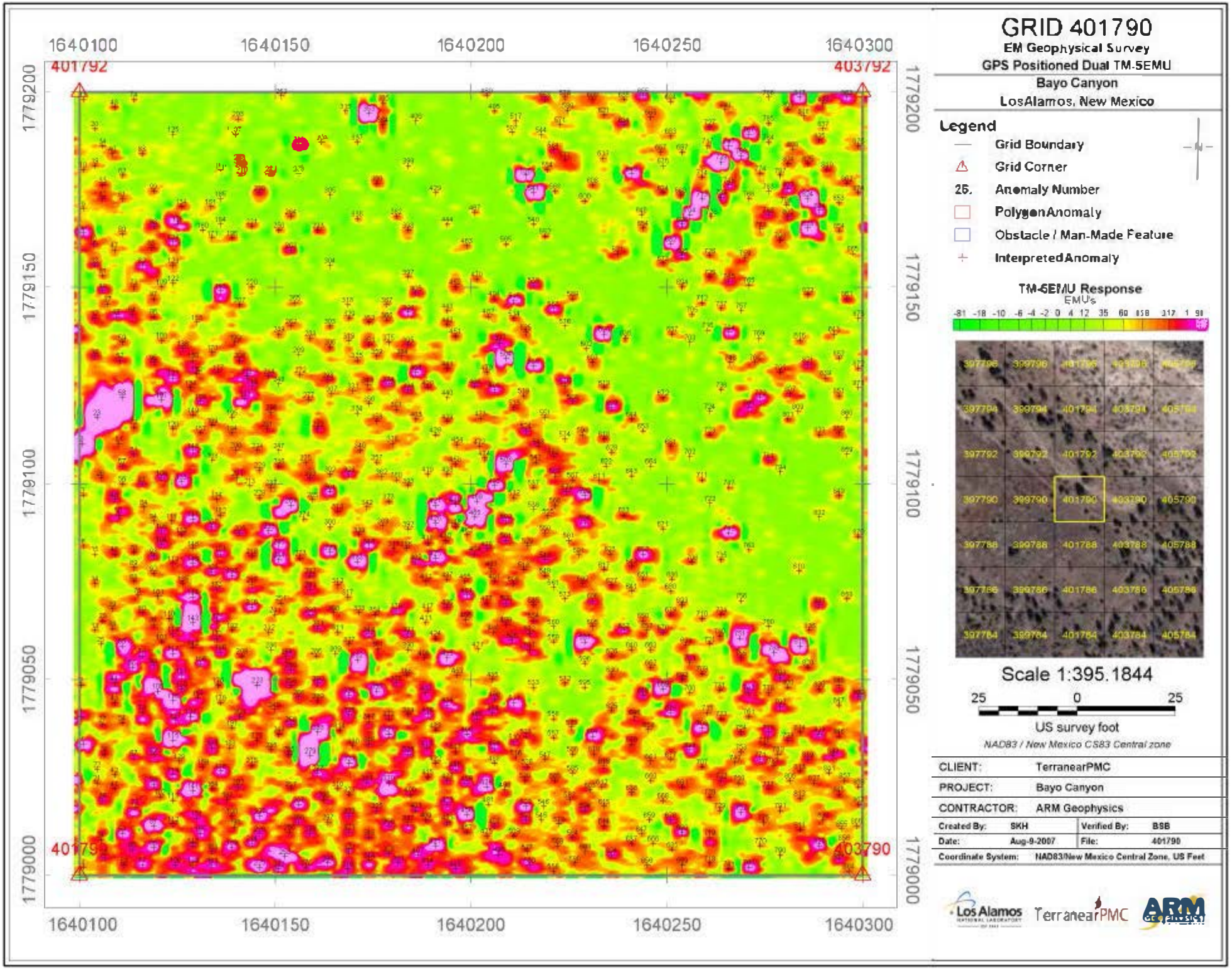
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-9-2007	File:	403788
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY TerranearPMC ARM GEOPHYSICS



GRID 401790

EM Geophysical Survey

GPS Positioned Dual TM-5EMU

Bayo Canyon

LosAlamos, New Mexico

Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- PolygonAnomaly
- Obstacle / Man-Made Feature
- InterpretedAnomaly

TM-5EMU Response

EMUs

-81 -18 -10 -6 -4 -2 0 4 12 35 80 858 317 1 98

Scale 1:395.1844

25 0 25

US survey foot

NAD83 / New Mexico CS83 Central zone

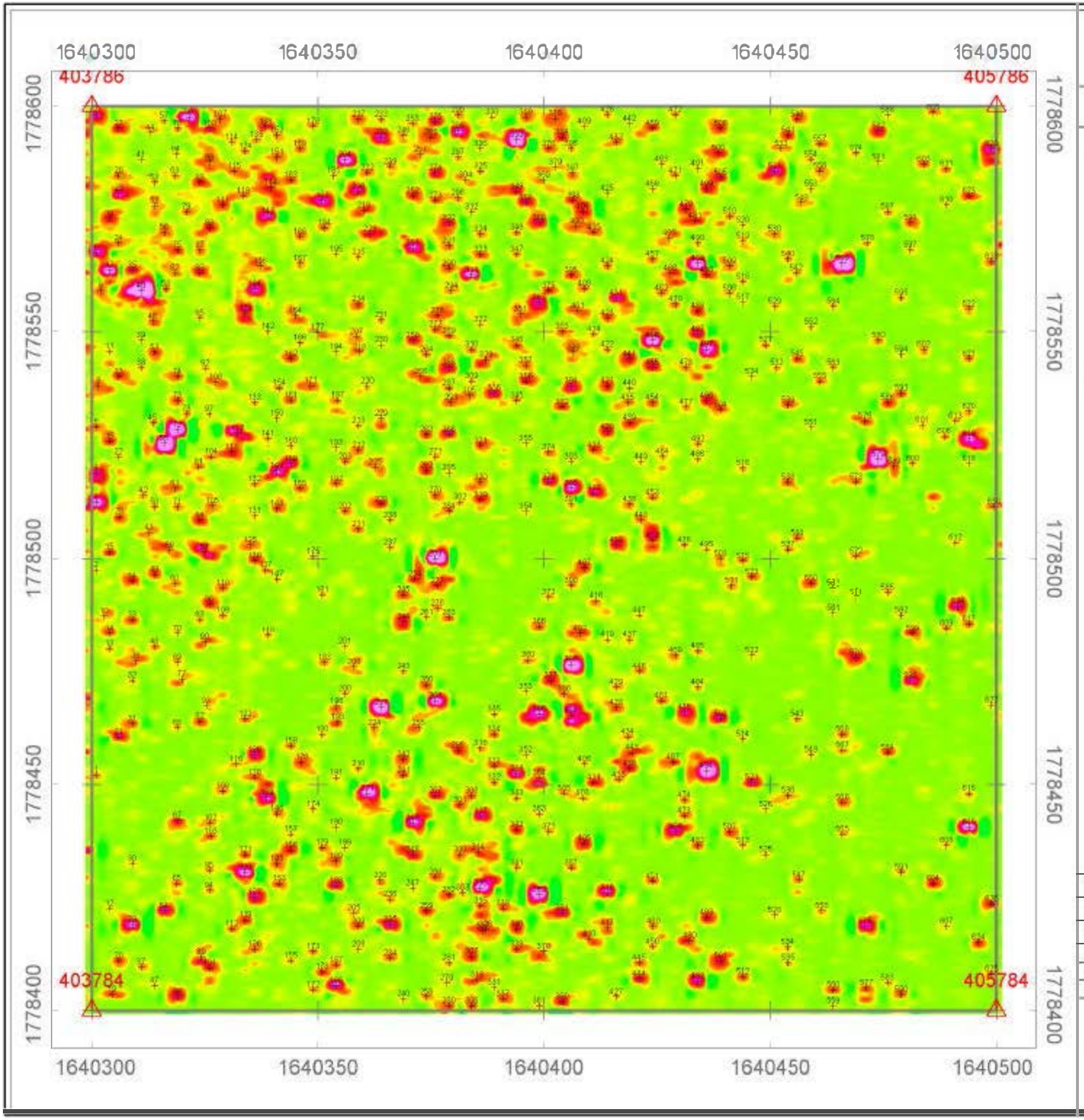
CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-9-2007	File:	401790
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY

TerranearPMC

ARM GEOPHYSICS



GRID 403784

EM Geophysical Survey

GPS Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

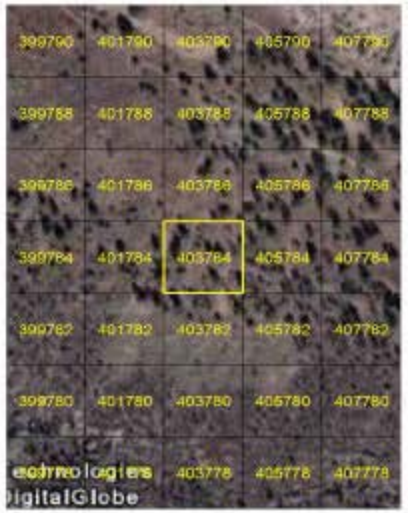
Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:395.1844

25 0 25

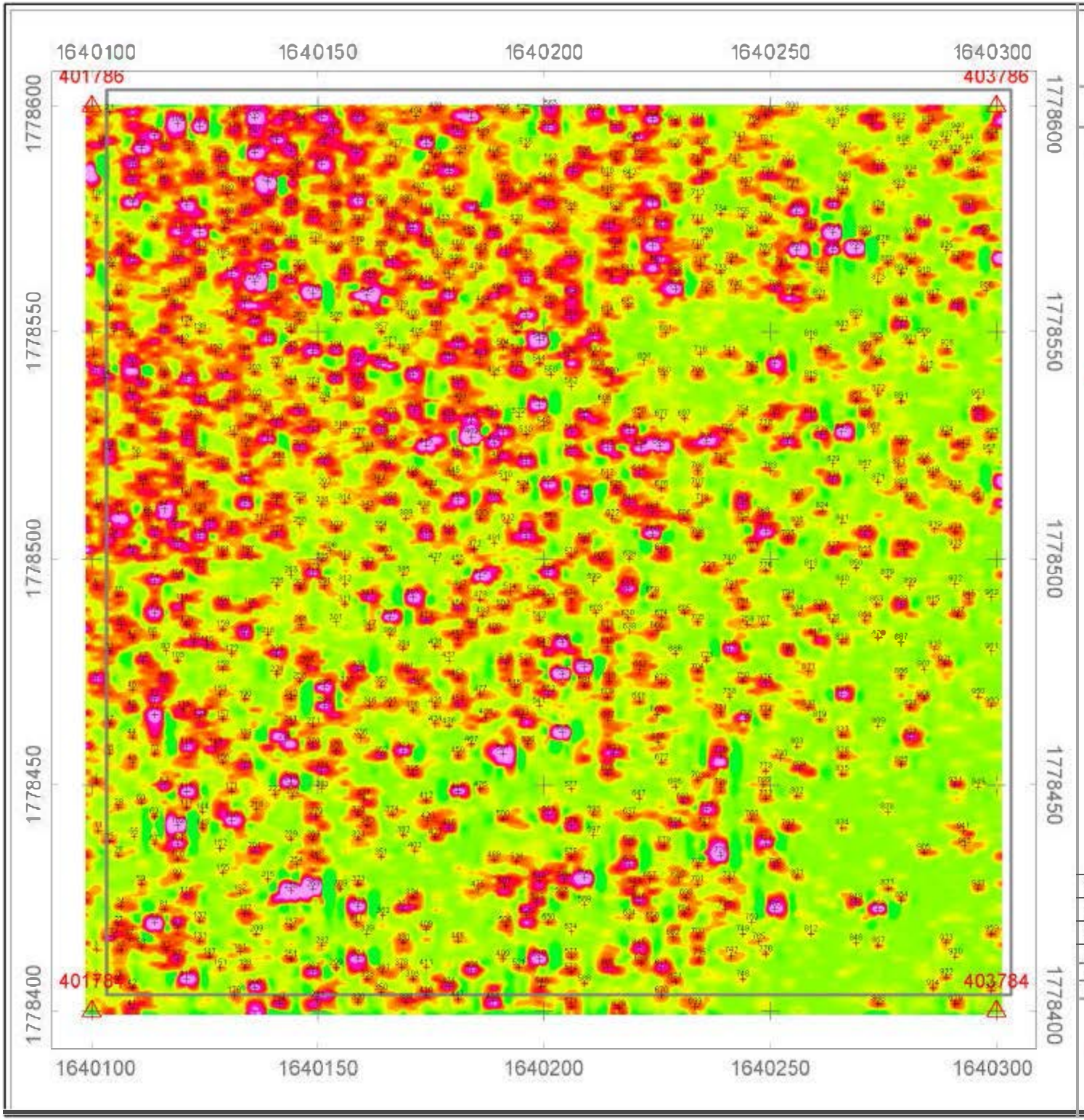
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-9-2007	File:	403784
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY EST. 1943 TerranearPMC ARM GEOPHYSICS



GRID 401784

EM Geophysical Survey

GPS Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

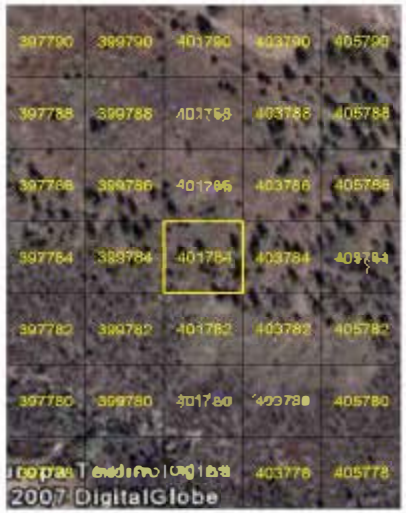
Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:395.1836

25 0 25

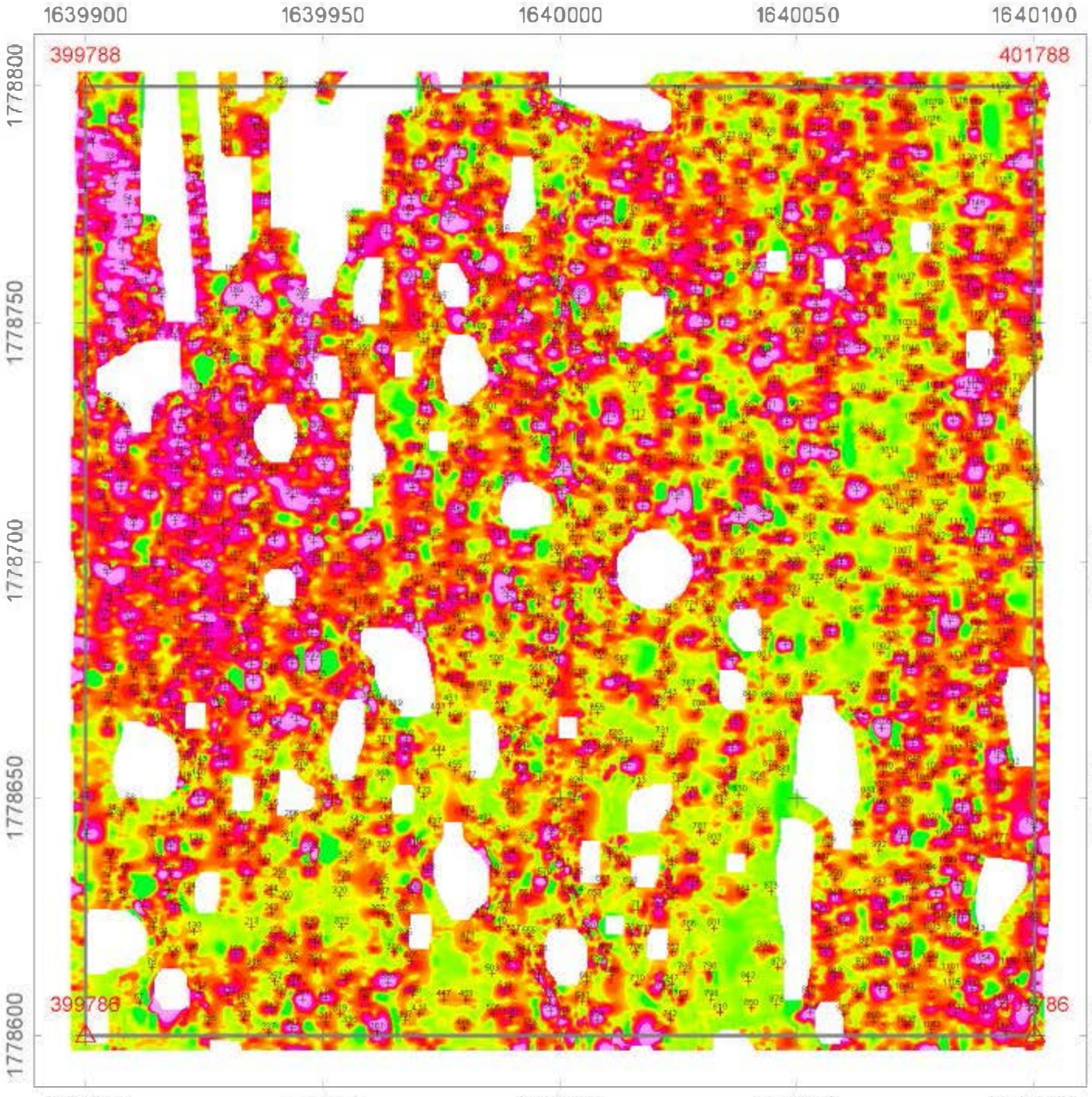
(feet)

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-9-2007	File:	401784
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY EST. 1943 TerranearPMC ARM GEOPHYSICS



GRID 399786

EM Geophysical Survey

GPS Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

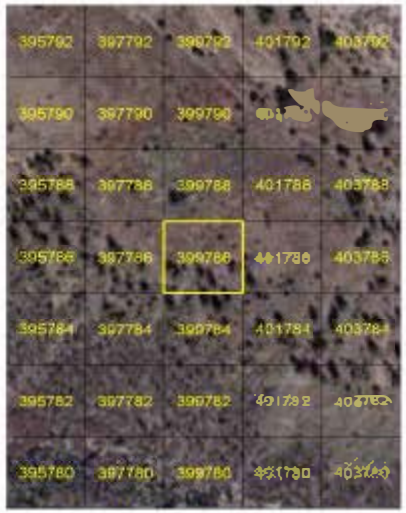
Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:402.6185

25 0 25

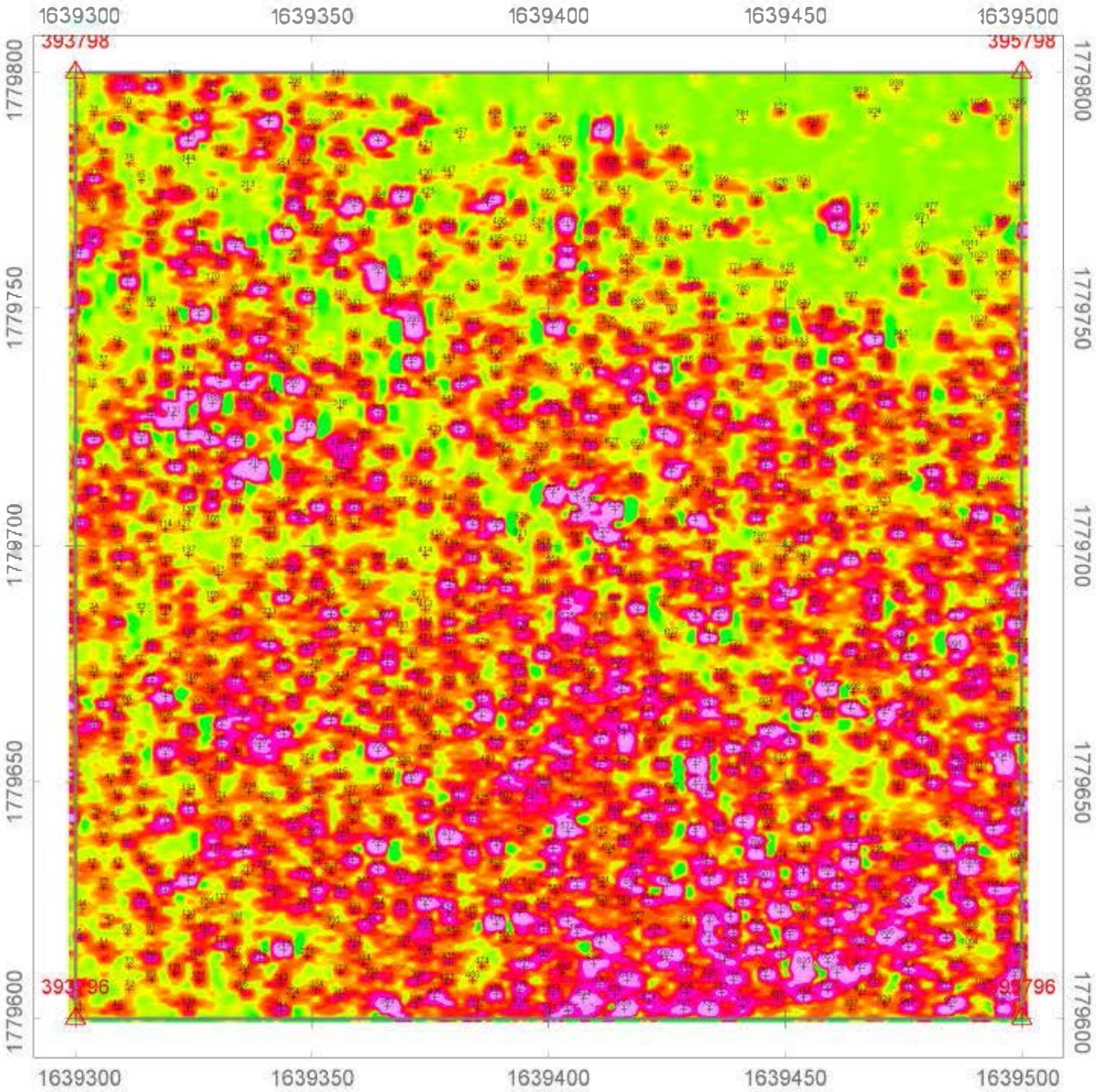
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Jul-27-2007	File:	399786
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY TerranearPMC ARM GEOPHYSICS



GRID 393796

EM Geophysical Survey

Cotton Odometer Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

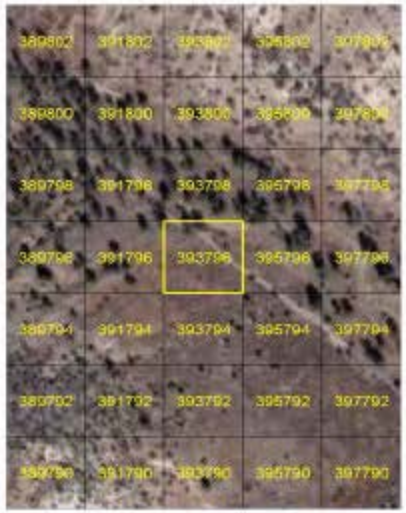
Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:395.1844

25 0 25

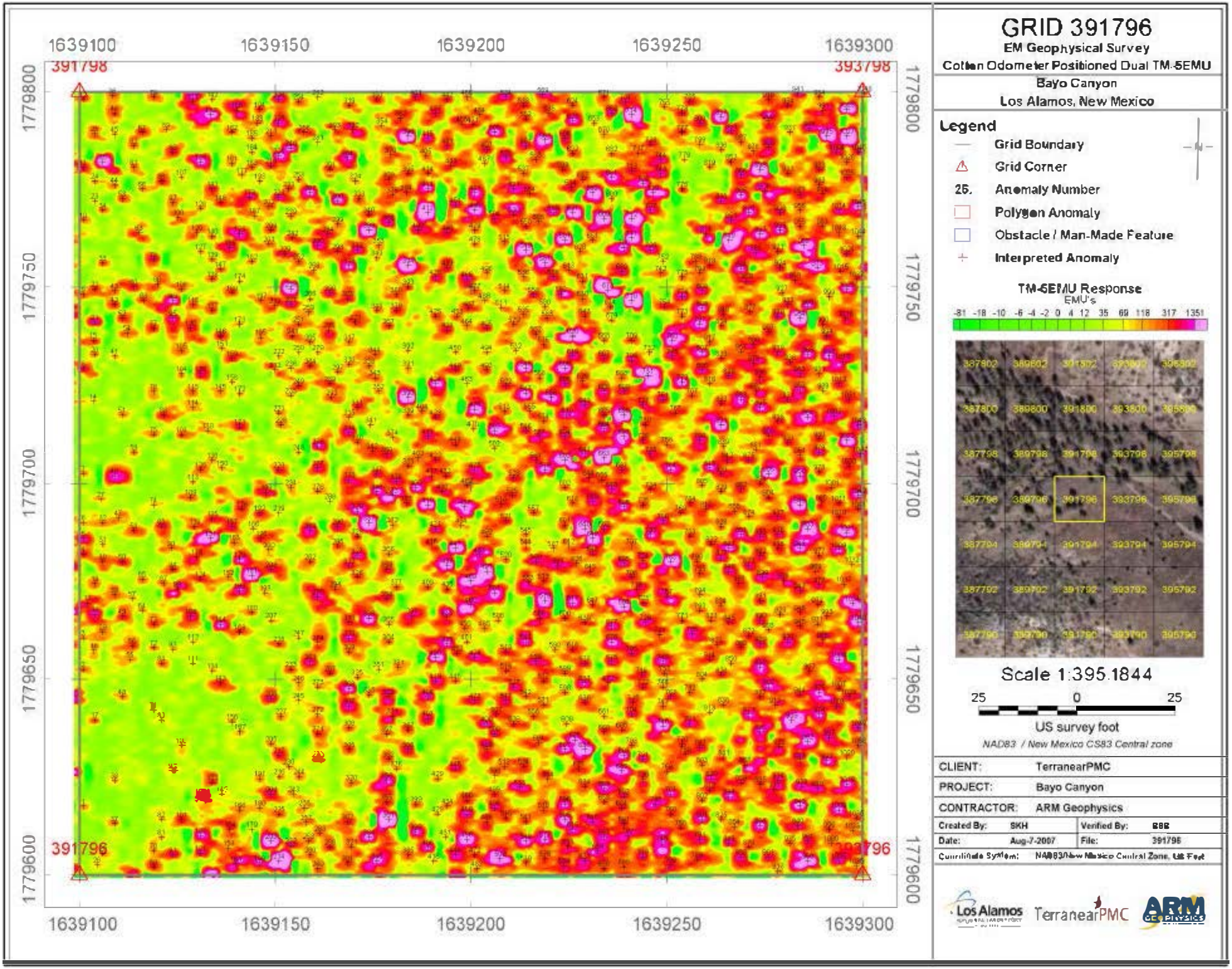
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-7-2007	File:	393796
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY TerranearPMC ARM GEOPHYSICS



GRID 391796

EM Geophysical Survey

Cotton Odometer Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351

Scale 1:395.1844

25 0 25

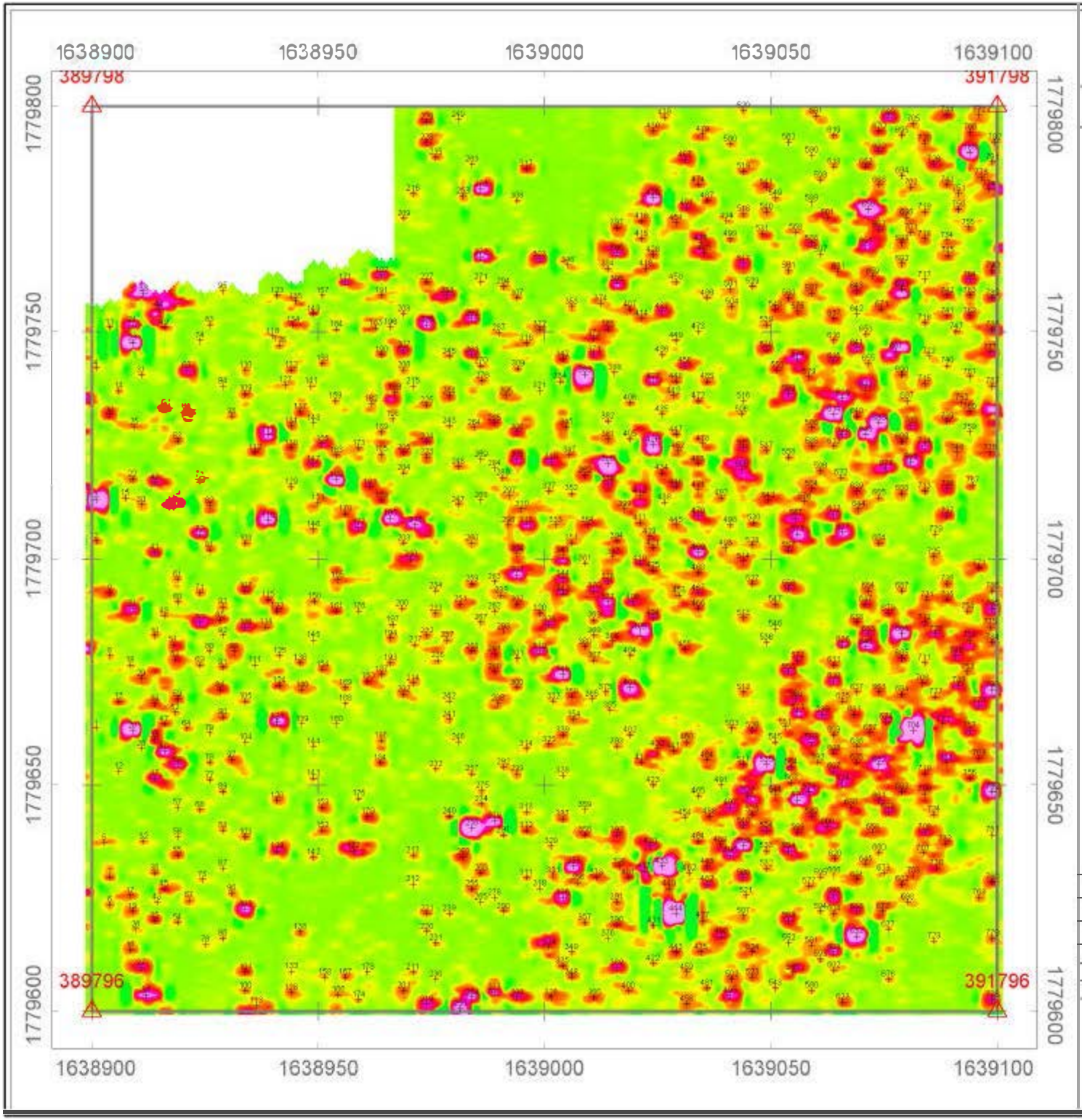
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BBB
Date:	Aug-7-2007	File:	391796
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos TerranearPMC ARM GEOPHYSICS



GRID 389796

EM Geophysical Survey

Cotton Odometer Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

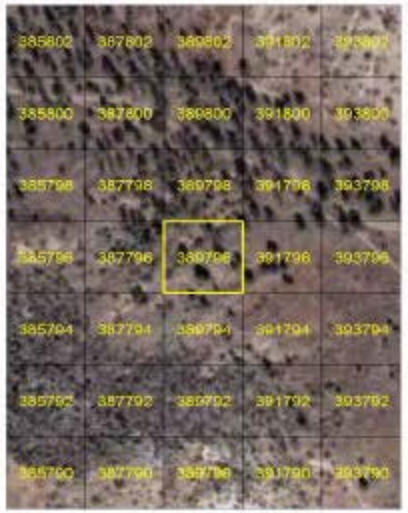
Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:395.1844

25 0 25

US survey foot

NAD83 / New Mexico CS83 Central zone

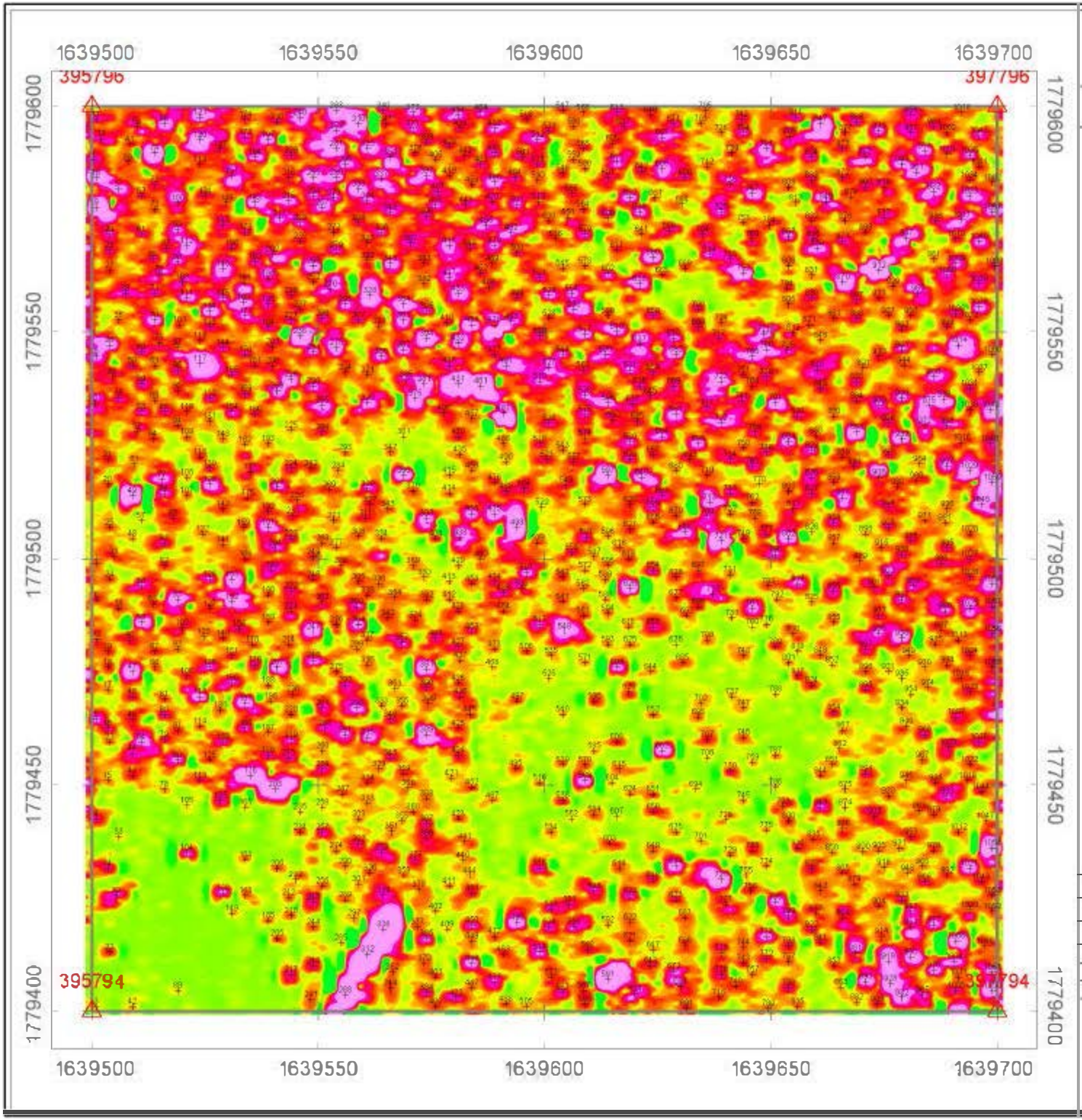
CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-7-2007	File:	389796
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY

TerranearPMC

ARM GEOPHYSICS



GRID 395794

EM Geophysical Survey

Cotton Odometer Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

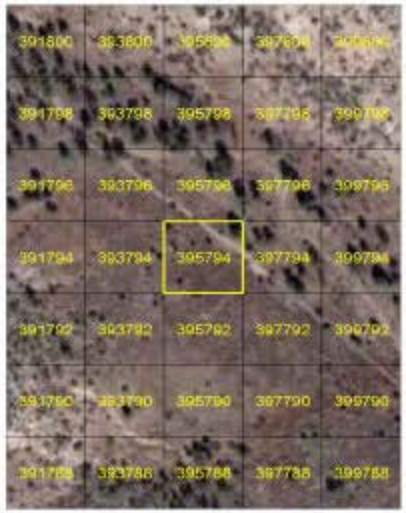
Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:395.1844

25 0 25

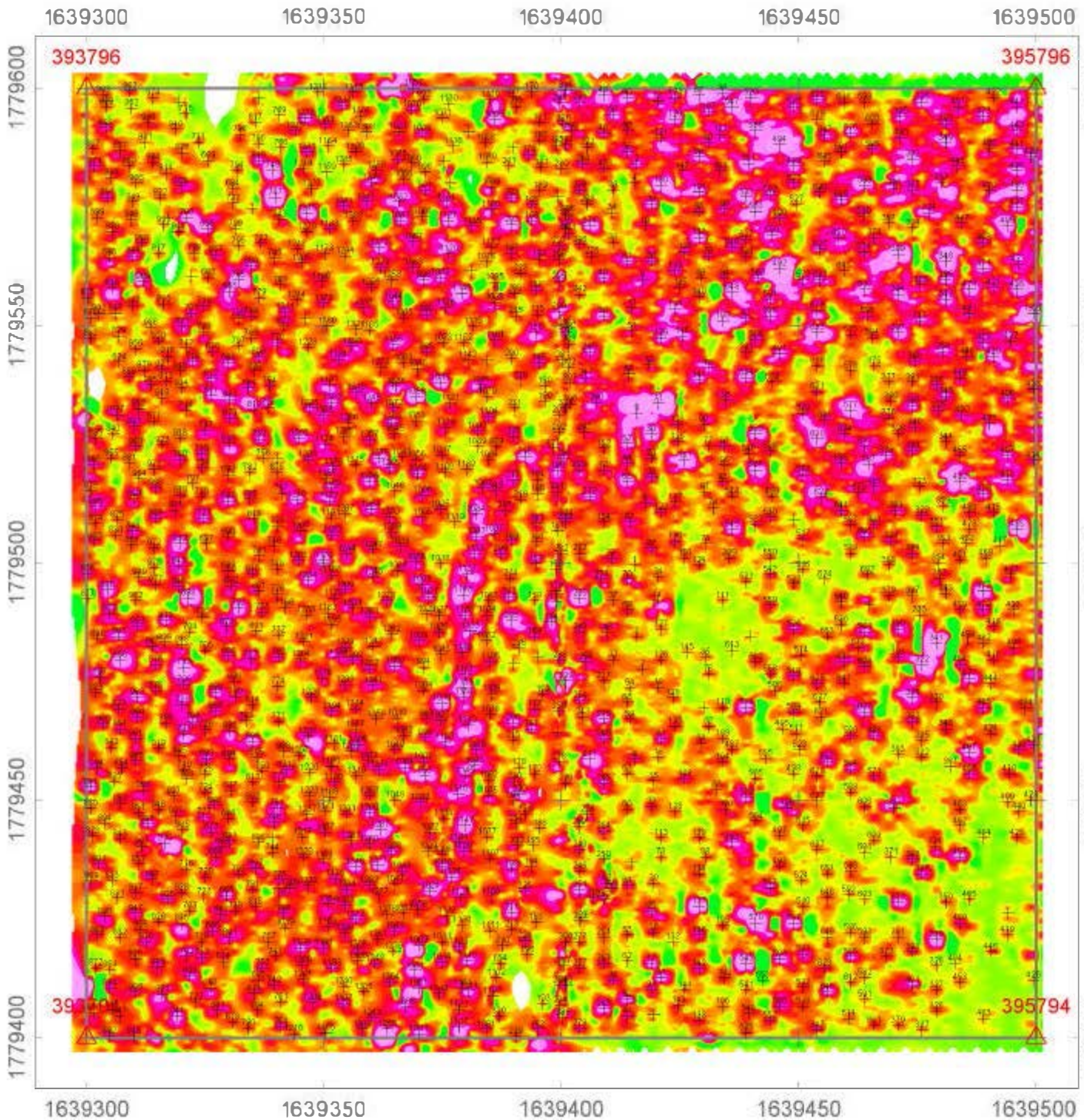
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-7-2007	File:	395794
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY EST. 1943 TerranearPMC ARM GEOPHYSICS



GRID 393794

EM Geophysical Survey

GPS Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

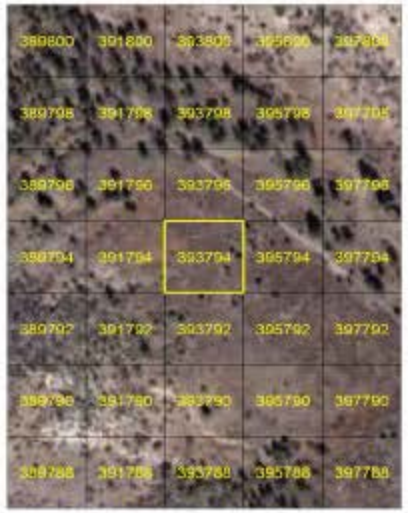
Legend

- Grid Boundary
- Grid Corner
- 26. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMUs

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:399.0971

25 0 25

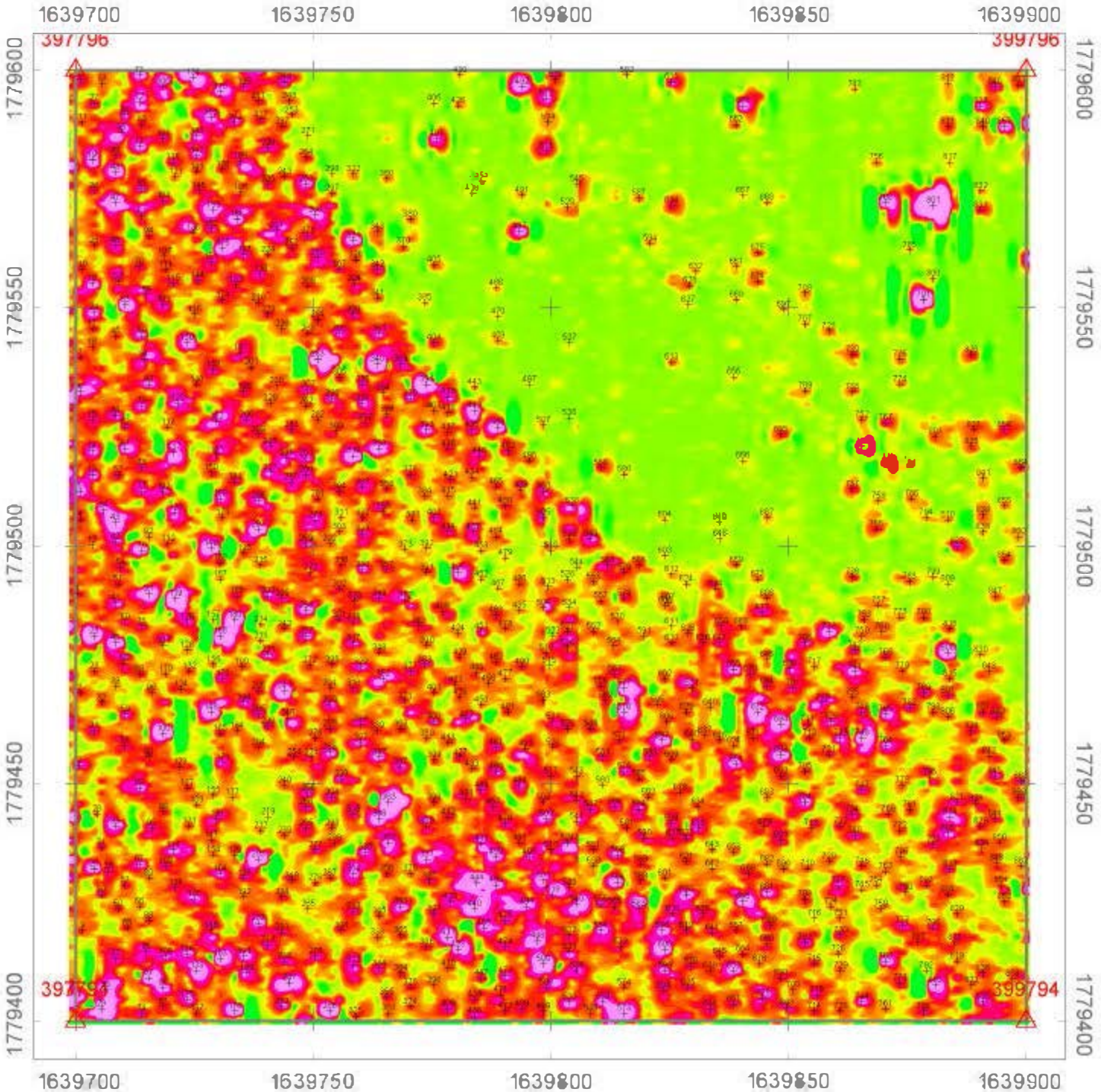
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	BSB	Verified By:	BSB
Date:	Sep-17-2007	File:	393794
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos TerranearPMC ARM GEOPHYSICS



GRID 397794

EM Geophysical Survey

Cotton Odometer Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

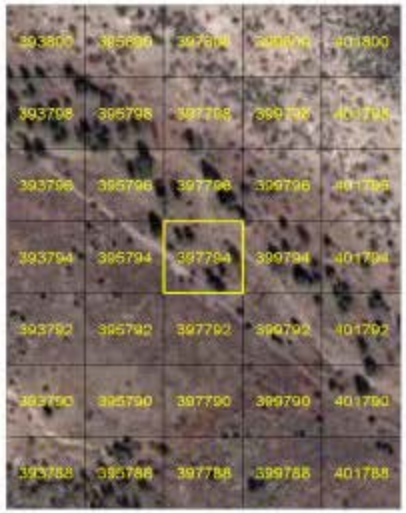
Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:394.2062

25 0 25

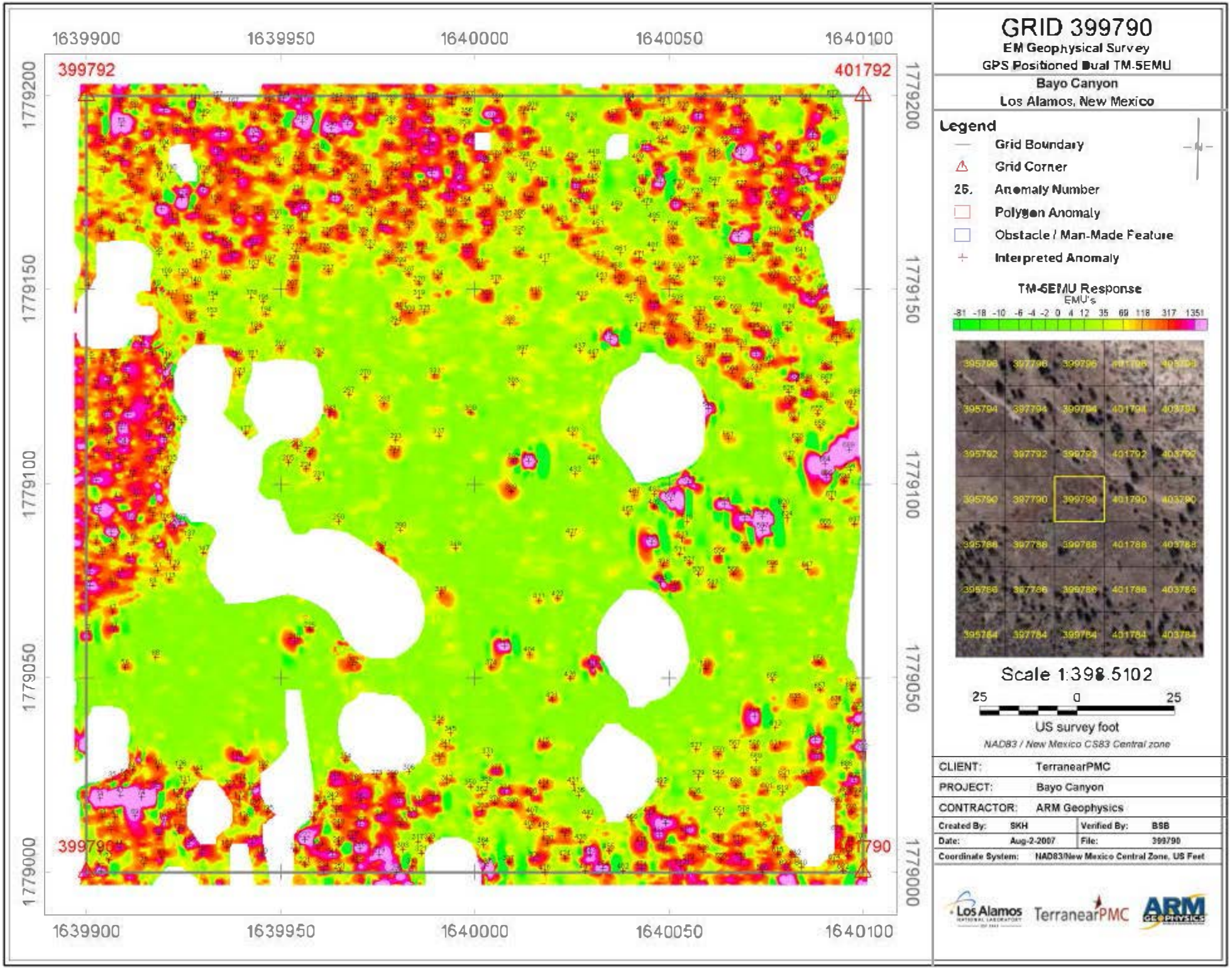
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-7-2007	File:	397794
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY TerranearPMC ARM GEOPHYSICS



GRID 399790

EM Geophysical Survey

GPS Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351

Scale 1:398.5102

25 0 25

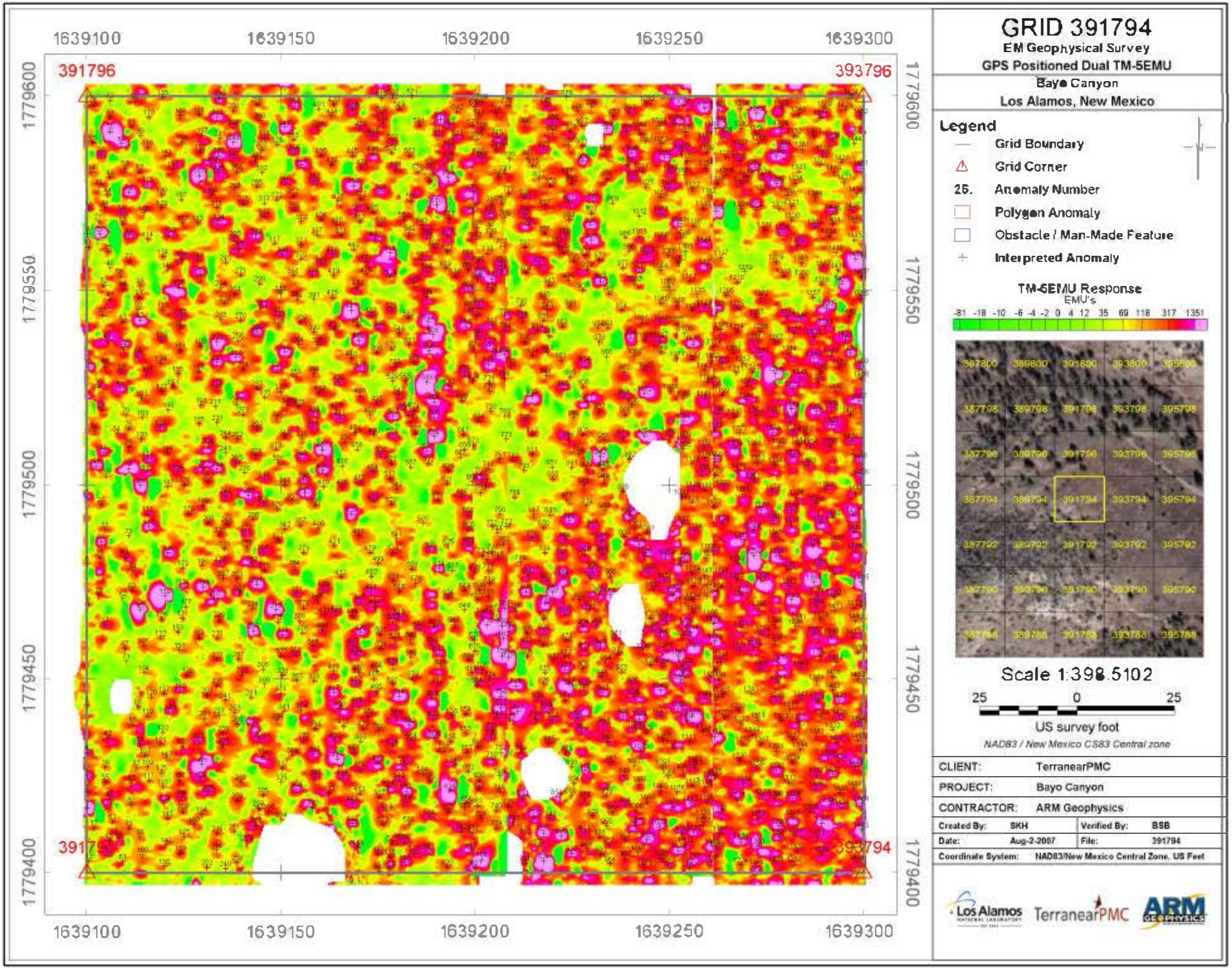
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-2-2007	File:	399790
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY EST. 1943 TerranearPMC ARM GEOPHYSICS



GRID 391794

EM Geophysical Survey

GPS Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351

Scale 1:398.5102

25 0 25

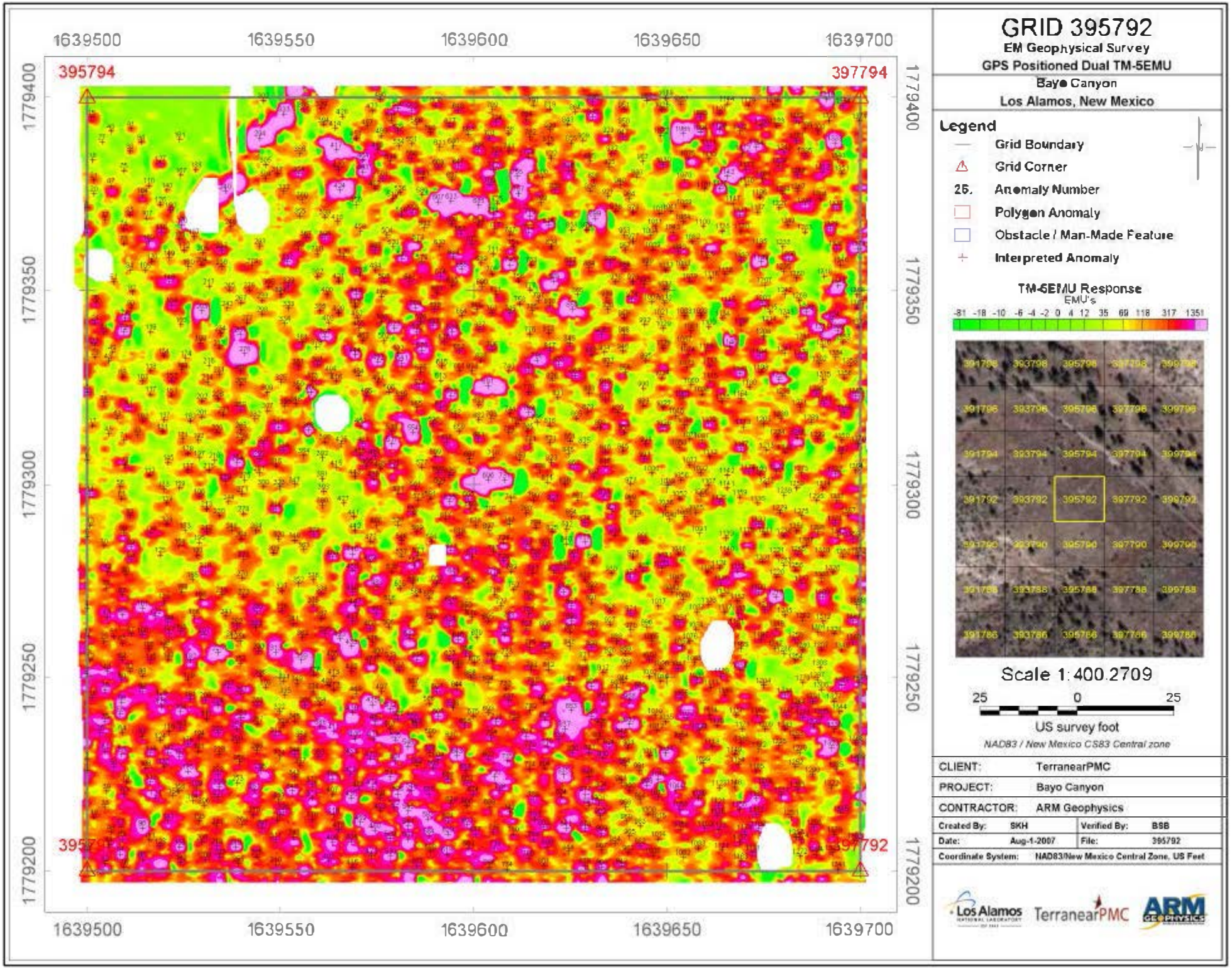
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-2-2007	File:	391794
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY TerranearPMC ARM GEOPHYSICS



GRID 395792

EM Geophysical Survey

GPS Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351

Scale 1:400.2709

25 0 25

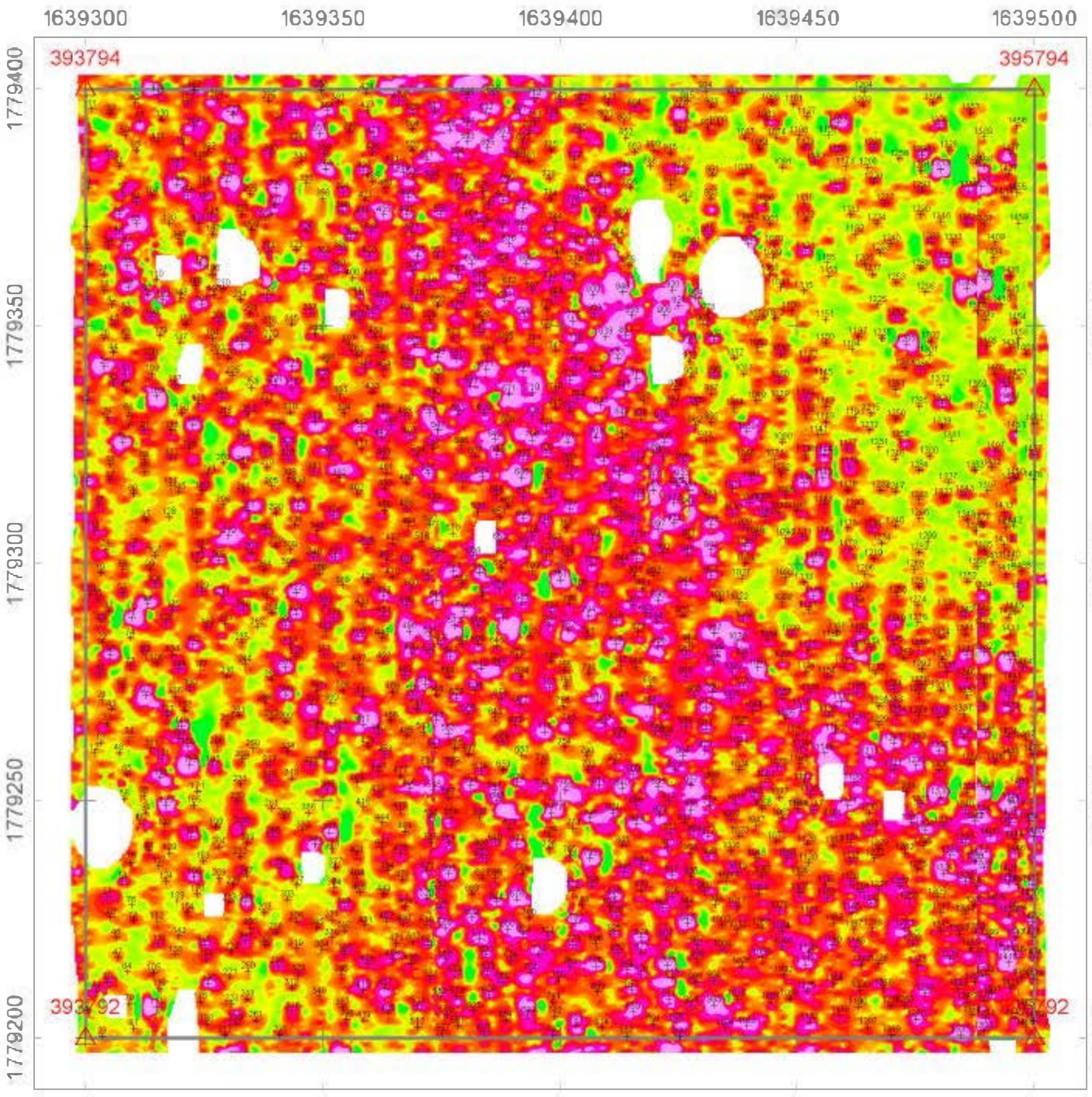
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-1-2007	File:	395792
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY EST. 1943 TerranearPMC ARM GEOPHYSICS



GRID 393792

EM Geophysical Survey

GPS Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

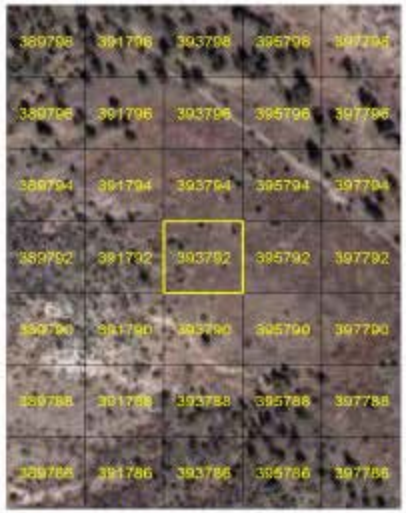
Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:402.6185

25 0 25

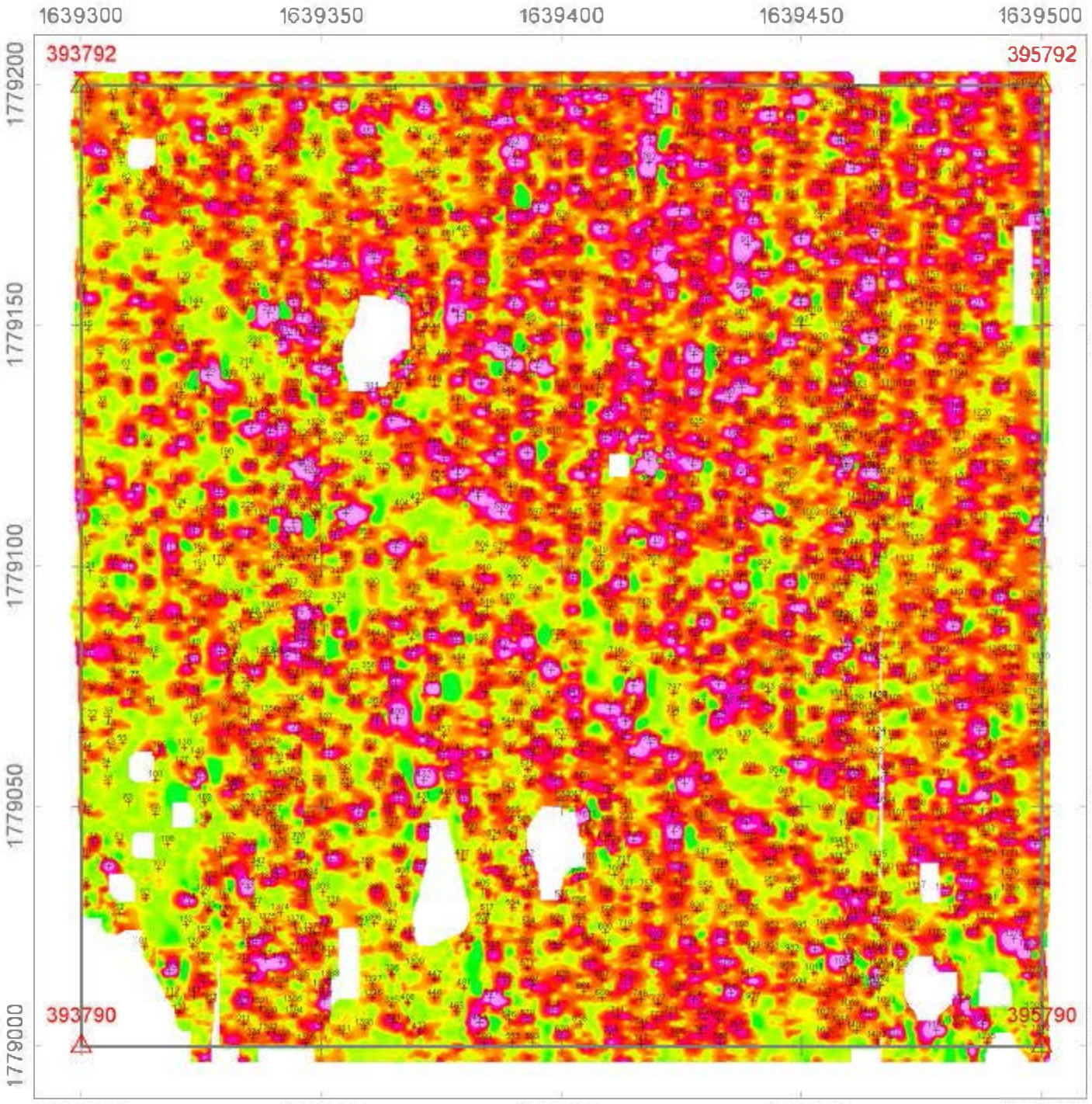
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-1-2007	File:	393792
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY EST. 1943 TerranearPMC ARM GEOPHYSICS



GRID 393790

EM Geophysical Survey

GPS Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

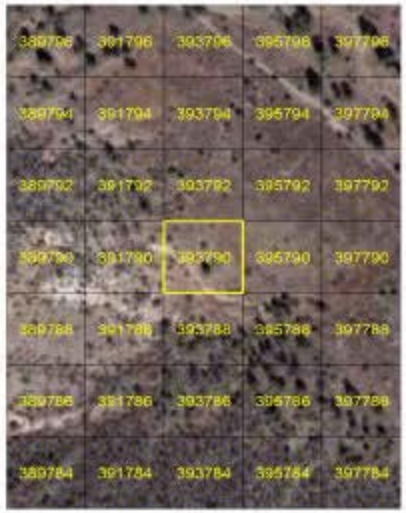
Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:397.9233

25 0 25

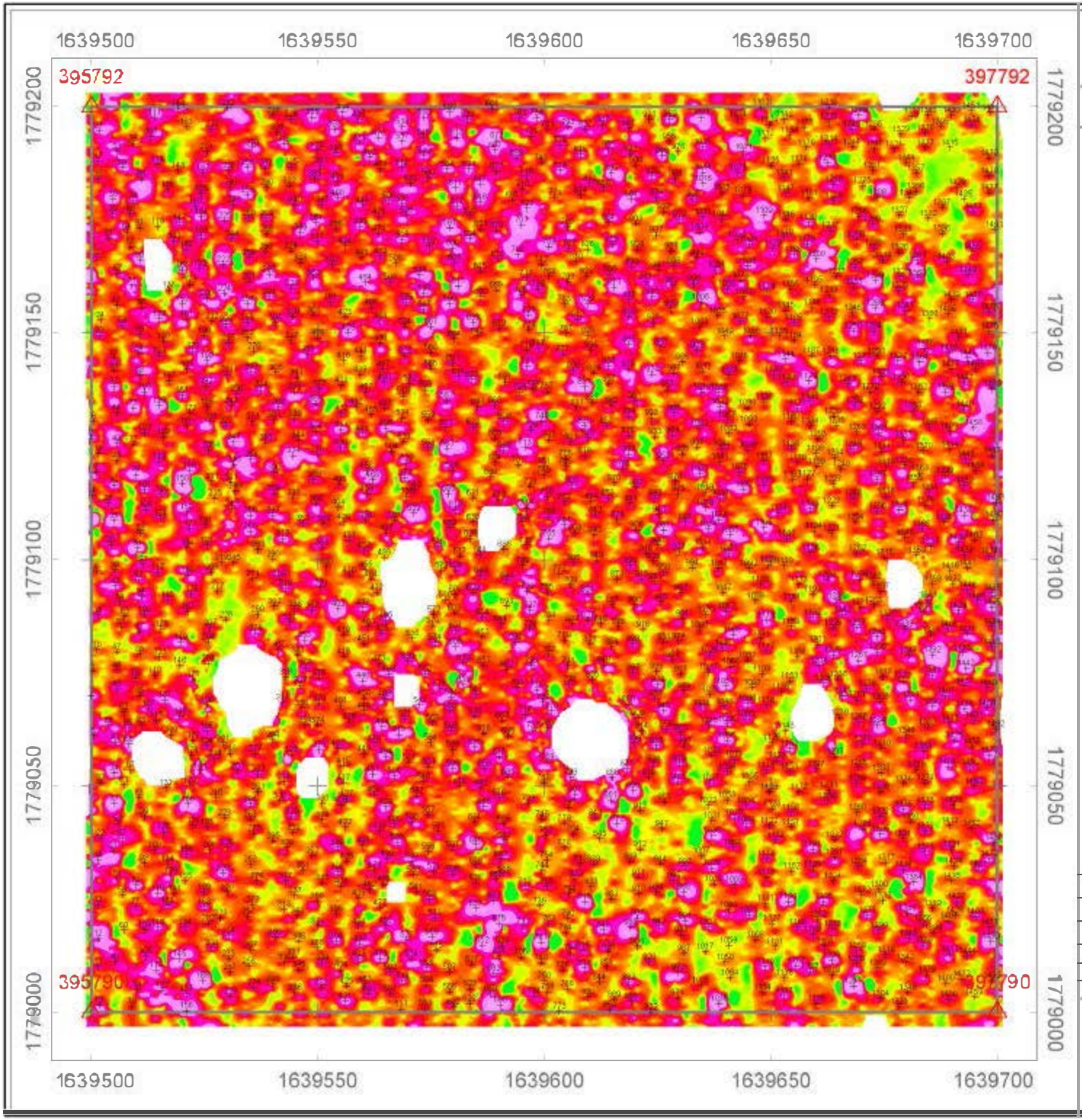
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Aug-1-2007	File:	393790
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY TerranearPMC ARM GEOPHYSICS



GRID 395790

EM Geophysical Survey

GPS Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

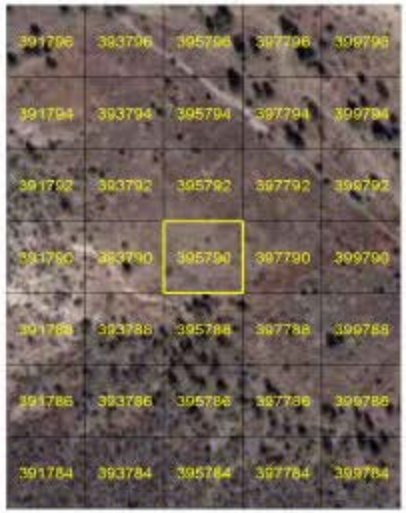
Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:394.9887

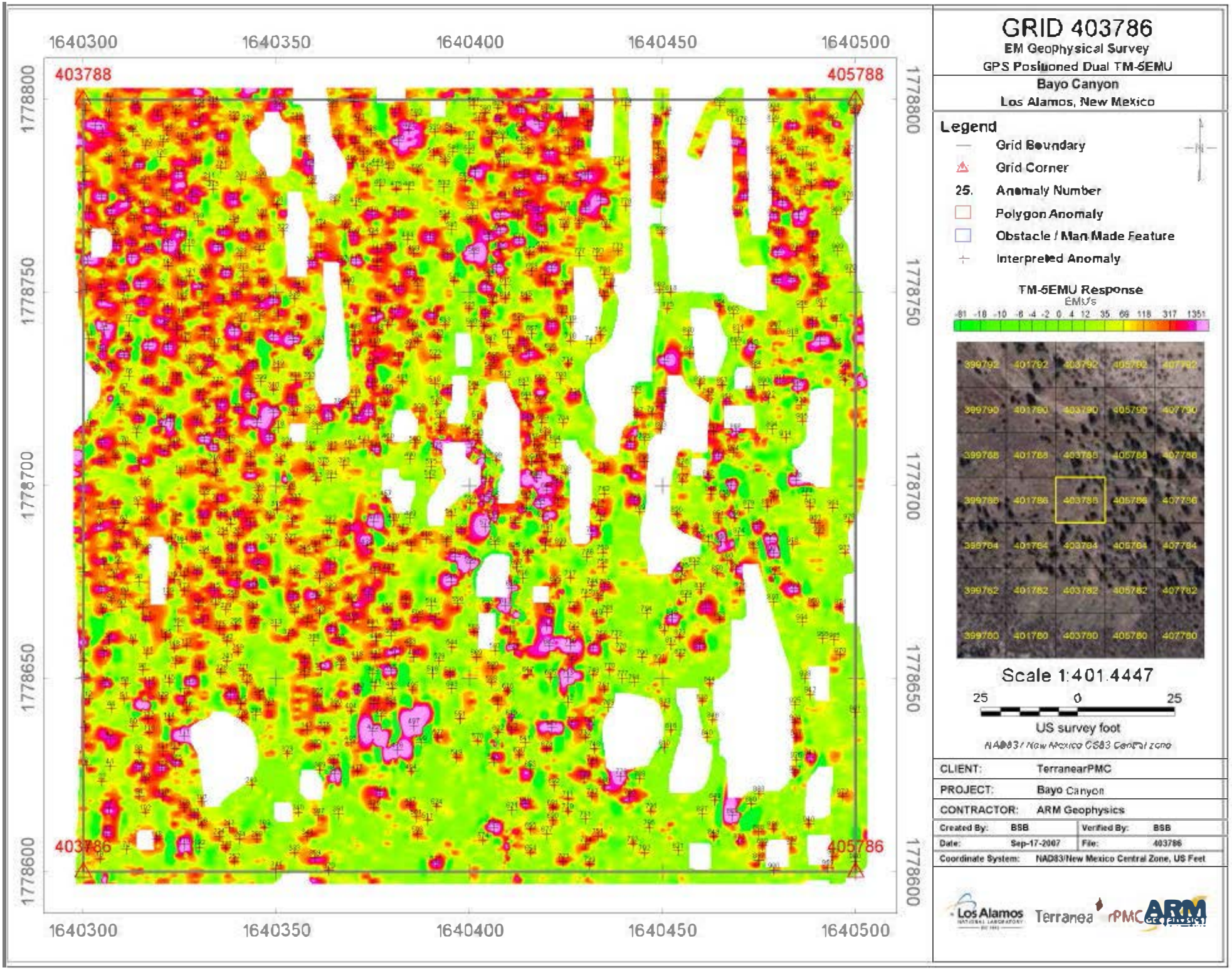
25 0 25

US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics
Created By: SKH	Verified By: BSB
Date: Jul-31-2007	File: 395790
Coordinate System:	NAD83/New Mexico Central Zone, US Feet

Los Alamos NATIONAL LABORATORY EST. 1943 TerranearPMC ARM GEOPHYSICS



GRID 403786

EM Geophysical Survey

GPS Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EM1/s

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351

Scale 1:401.4447

25 0 25

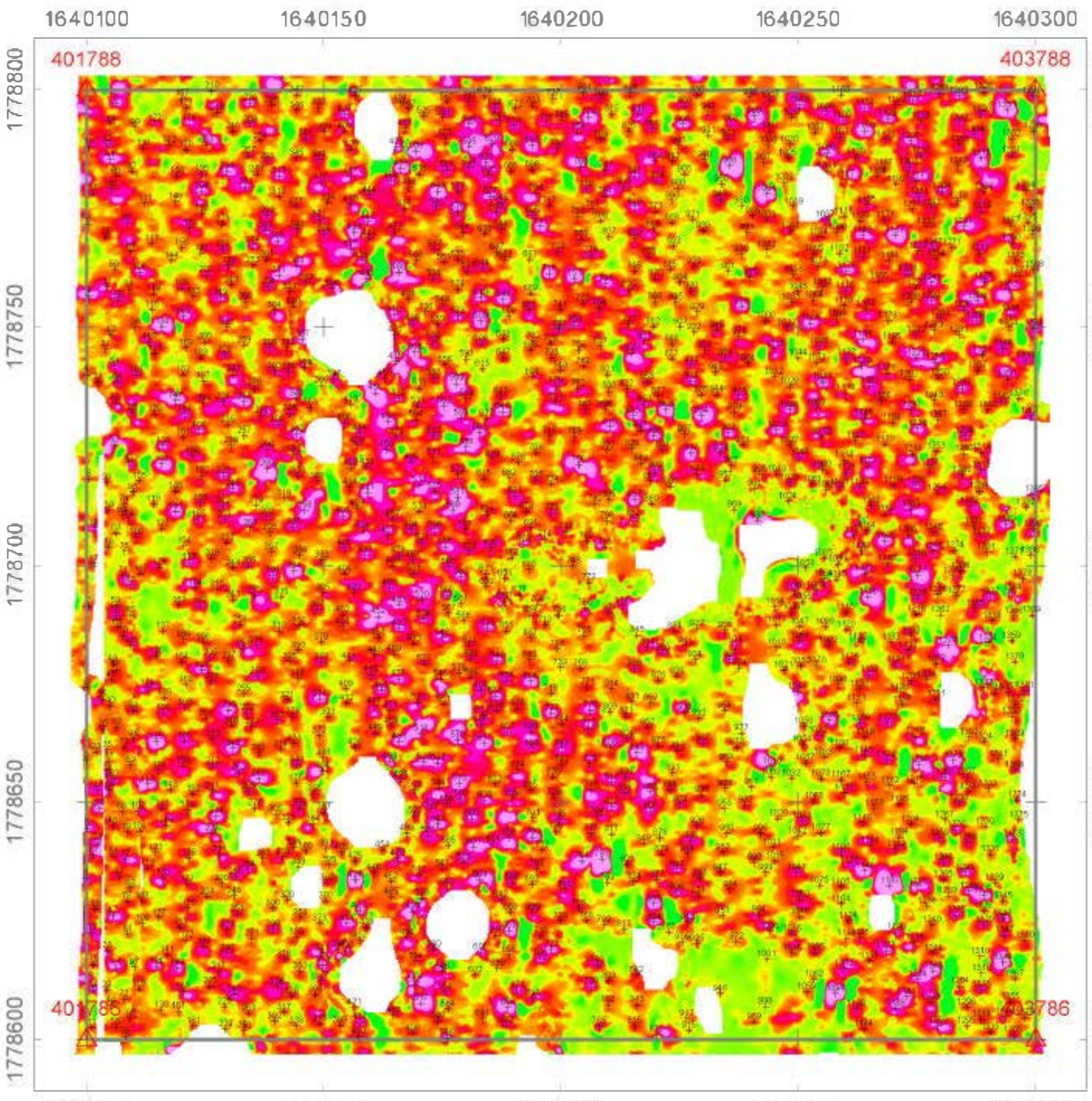
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	BSB	Verified By:	BSB
Date:	Sep-17-2007	File:	403786
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY Terranea rPMC ARM GEOPHYSICS



GRID 401786

EM Geophysical Survey

GPS Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

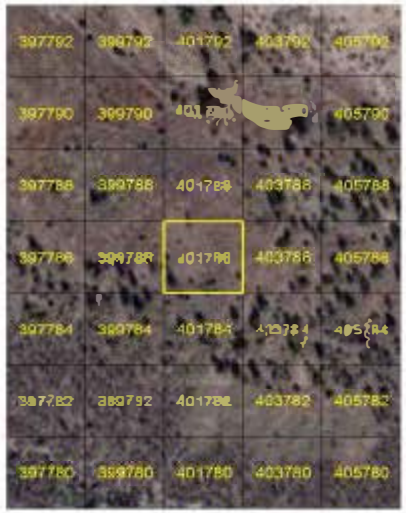
Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351



Scale 1:402.6185

25 0 25

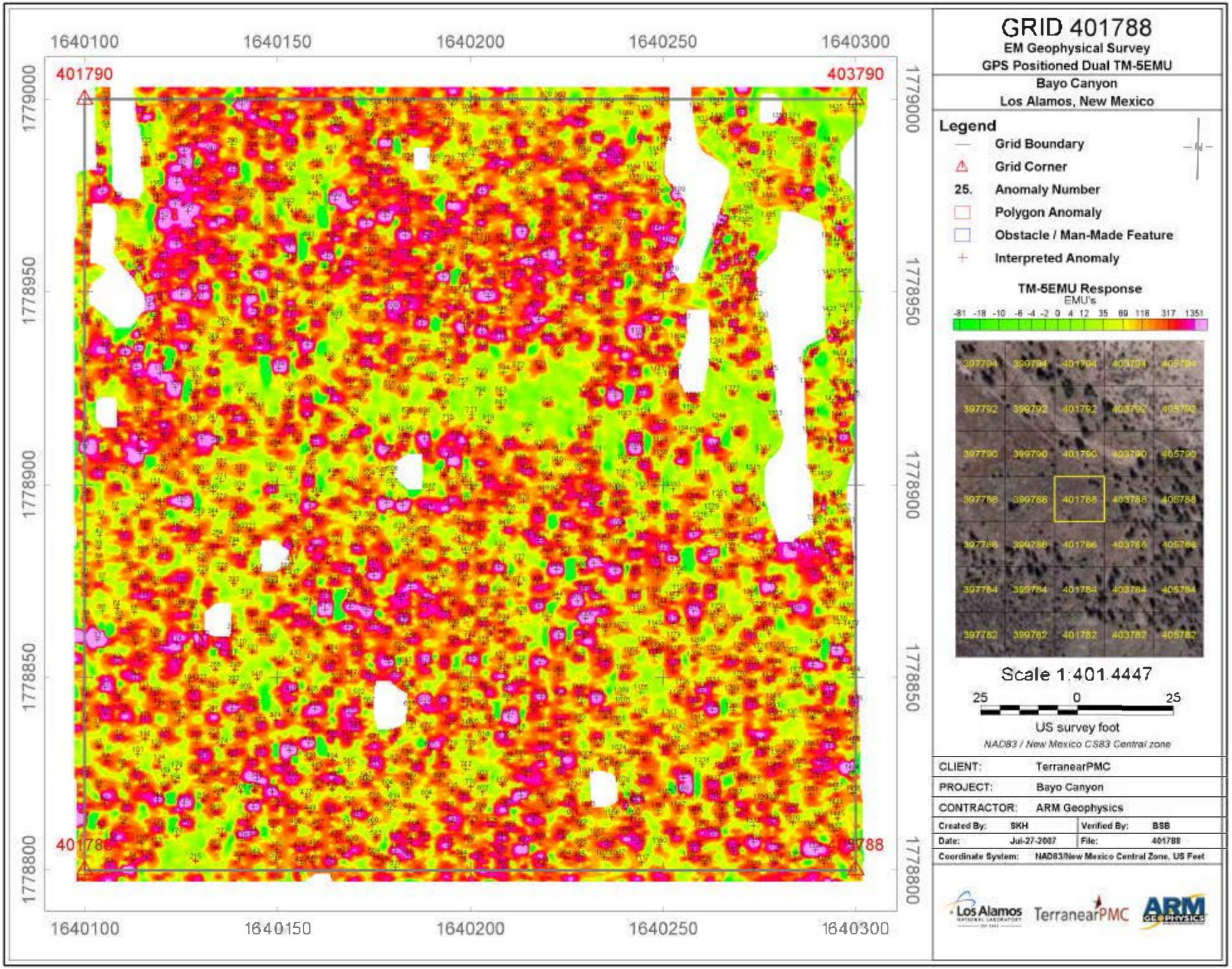
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BBB
Date:	Jul-30-2007	File:	401786
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

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GRID 401788

EM Geophysical Survey
GPS Positioned Dual TM-5EMU

Bayo Canyon
Los Alamos, New Mexico

Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response
EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351

Scale 1:401.4447

25 0 25

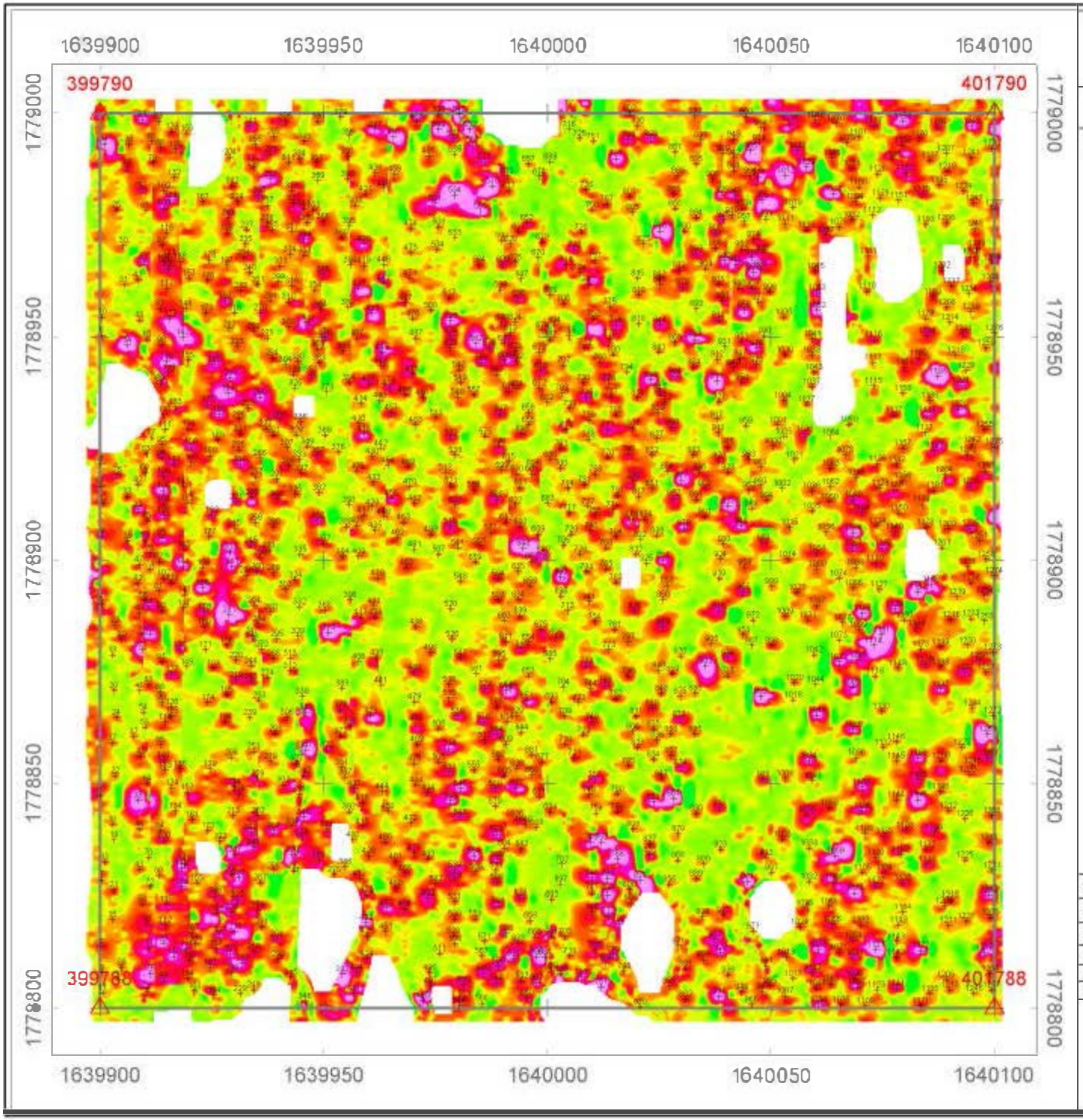
US survey foot

NAD83 / New Mexico CS83 Central zone

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Jul-27-2007	File:	401788
Coordinate System:	NAD83/New Mexico Central Zone, US Feet		

Los Alamos NATIONAL LABORATORY TerranearPMC ARM GEOPHYSICS



GRID 399788

EM Geophysical Survey

GPS Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

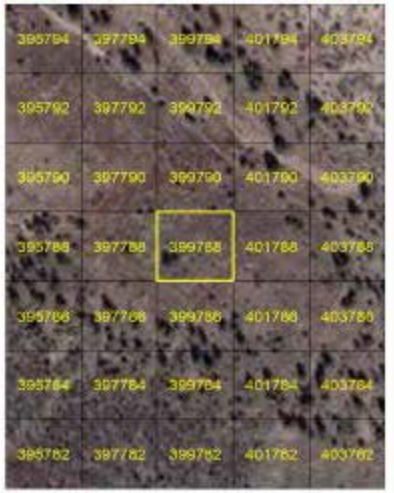
Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMVI's

-81 -18 -10 -5 -4 -2 0 4 12 35 69 118 317 1351



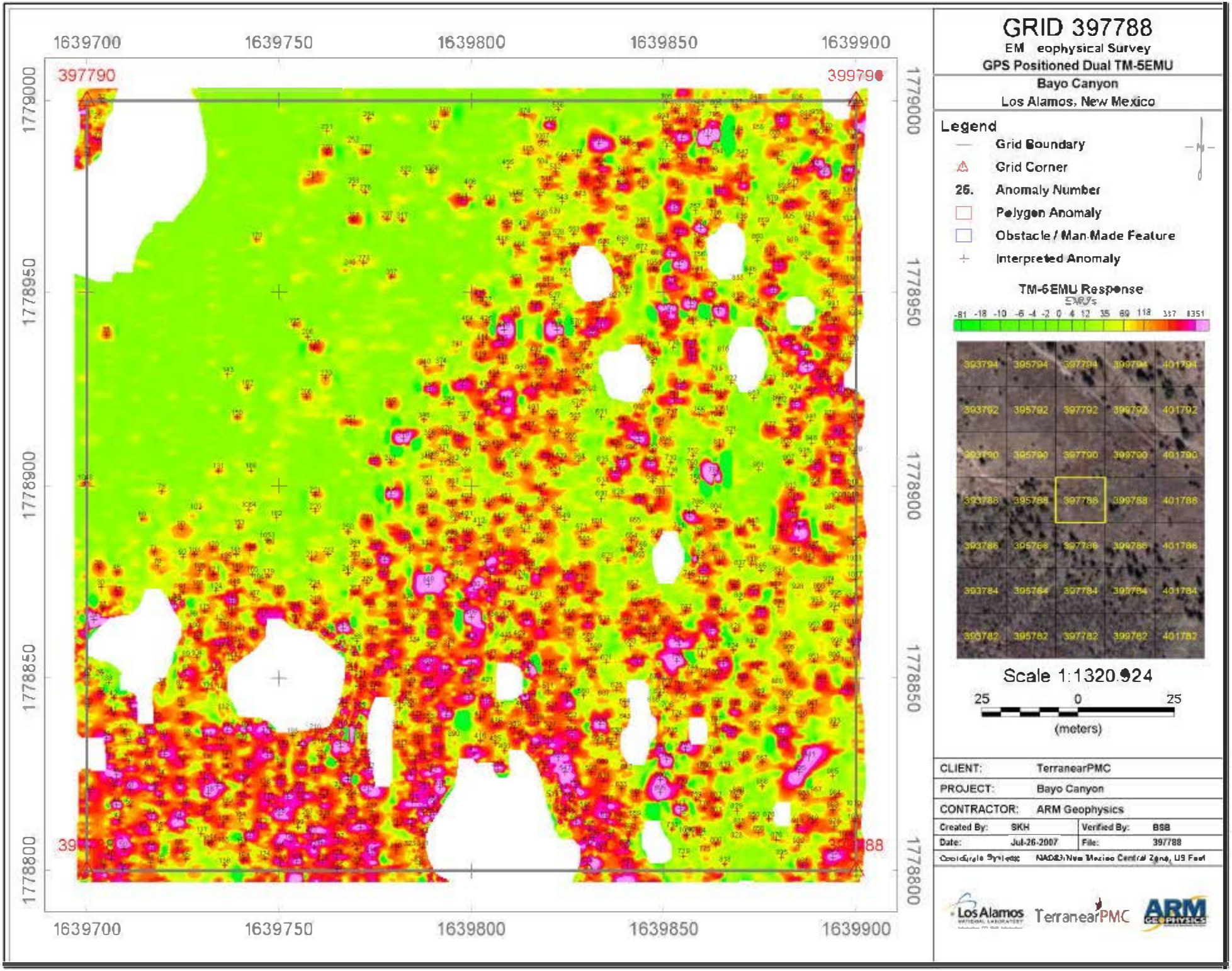
Scale 1:1311.297

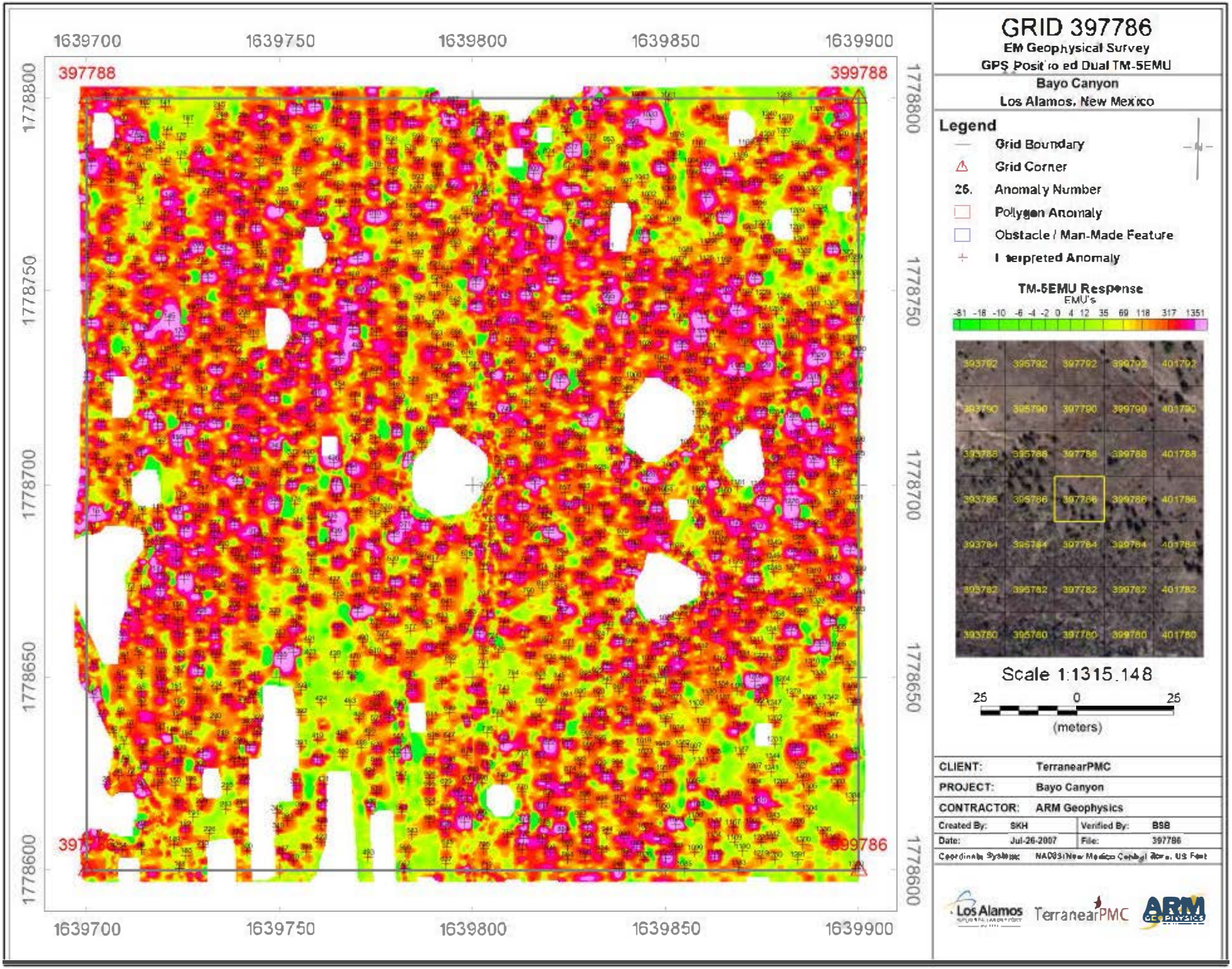
25 0 25

(meters)

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics
Created By: SKH	Verified By: BSB
Date: Jul-27-2007	File: 399788
Coordinate System:	NAD83/New Mexico Central Zone, US Feet

Los Alamos NATIONAL LABORATORY TerranearPMC ARM GEOPHYSICS


1639700
1639750
1639800
1639850
1639900
1779000
1778950
1778900
1778850
1778800
397790
399790
397788
GRID 397788
EM eophysical Survey
GPS Positioned Dual TM-5EMU
Bayo Canyon
Los Alamos, New Mexico
Legend
Grid Boundary
Grid Corner
26. Anomaly Number
Polygon Anomaly
Obstacle / Man-Made Feature
Interpreted Anomaly
TM-6EMU Response
-81 -18 -10 -6 -4 -2 0 4 12 35 89 118 357 8351
Scale 1:1320.924
25 0 25
(meters)
CLIENT: TerranearPMC
PROJECT: Bayo Canyon
CONTRACTOR: ARM Geophysics
Created By: SKH
Verified By: BSB
Date: Jul-26-2007
File: 397788
Coordinate System: NAD83/New Mexico Central Zone, US Feet
Los Alamos
TerranearPMC
ARM GEOPHYSICS



GRID 397786

EM Geophysical Survey

GPS Positioned Dual TM-5EMU

Bayo Canyon

Los Alamos, New Mexico

Legend

- Grid Boundary
- Grid Corner
- 25. Anomaly Number
- Polygon Anomaly
- Obstacle / Man-Made Feature
- Interpreted Anomaly

TM-5EMU Response

EMU's

-81 -18 -10 -6 -4 -2 0 4 12 35 69 118 317 1351

Scale 1:1315.148

25 0 25

(meters)

CLIENT:	TerranearPMC
PROJECT:	Bayo Canyon
CONTRACTOR:	ARM Geophysics

Created By:	SKH	Verified By:	BSB
Date:	Jul-26-2007	File:	397786

Coordinate System: NAD83 New Mexico Central Zone, US Feet

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