Demonstration of Wide Area Assessment Technologies to Characterize Munitions Density

Closed Castner Firing Range
Fort Bliss, TX

Fort Bliss Restoration Advisory Board Meeting
13 January 2010

URS

Agenda

- Project Purpose
- What is not included in this project?
- Castner Range Overview
- What have we done so far?
- What have we learned so far?
- What is still to do?
- Project Points of Contact

Project Purpose

Demonstrate innovative munitions detection technologies on Army property

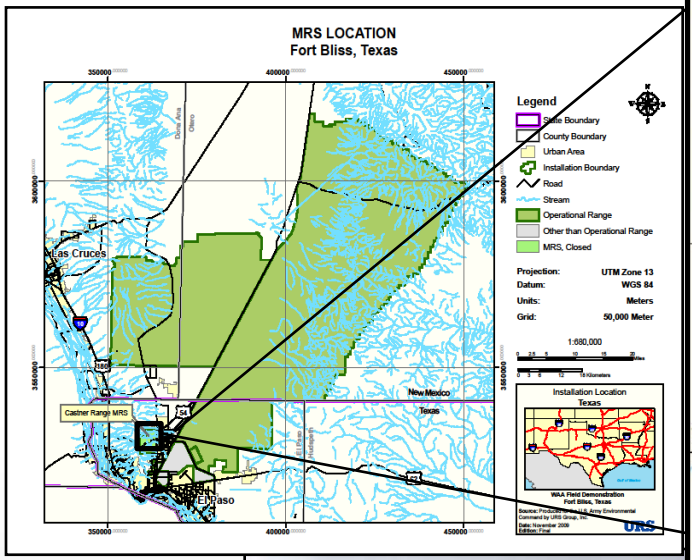
- Provide measures of relative munitions densities
- Identify areas of concentrated munitions use
- Identify areas with no indication of munitions presence

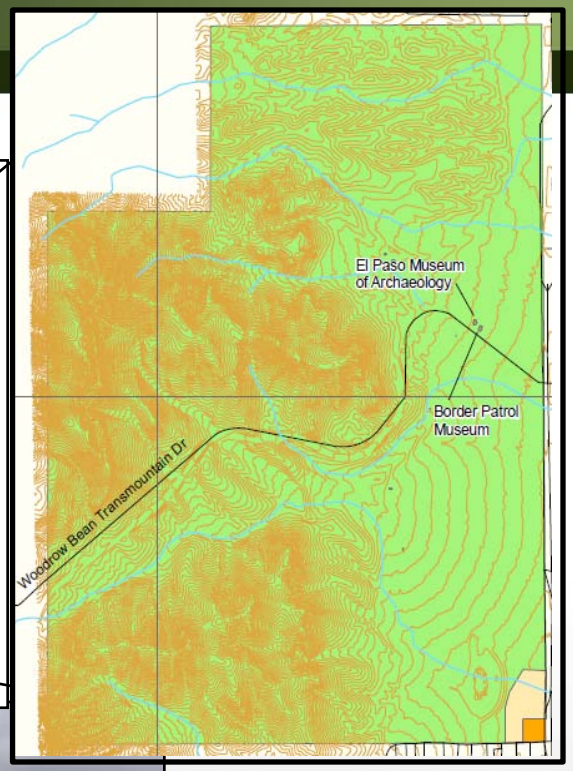
What is NOT included

- Remedial Investigation
- Decisions about future land use
- Decisions about transferring the property
- Decisions about developing the property
- Decisions about mapping individual ordnance items
- Decisions about cleaning-up all the munitions

Castner Range Overview

- Size
- Location
- Vegetation
- Terrain
- Historical Uses
- Munitions Types





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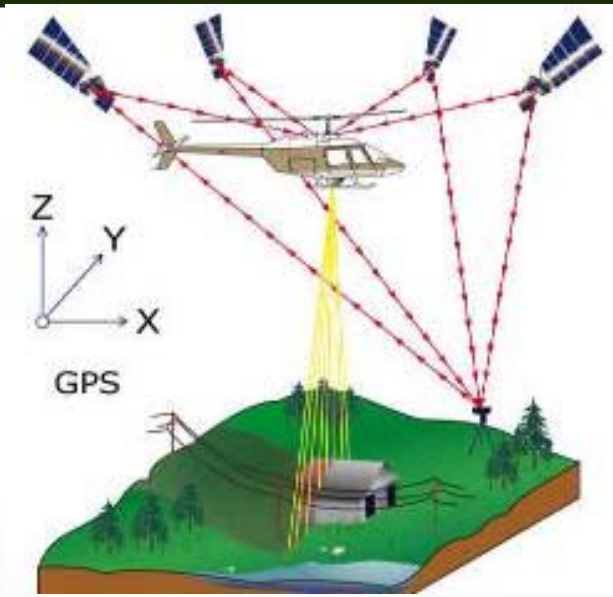
What have we done so far?

- Lidar & Orthophotography
- Site Preparation
- Helicopter-Borne Magnetometry

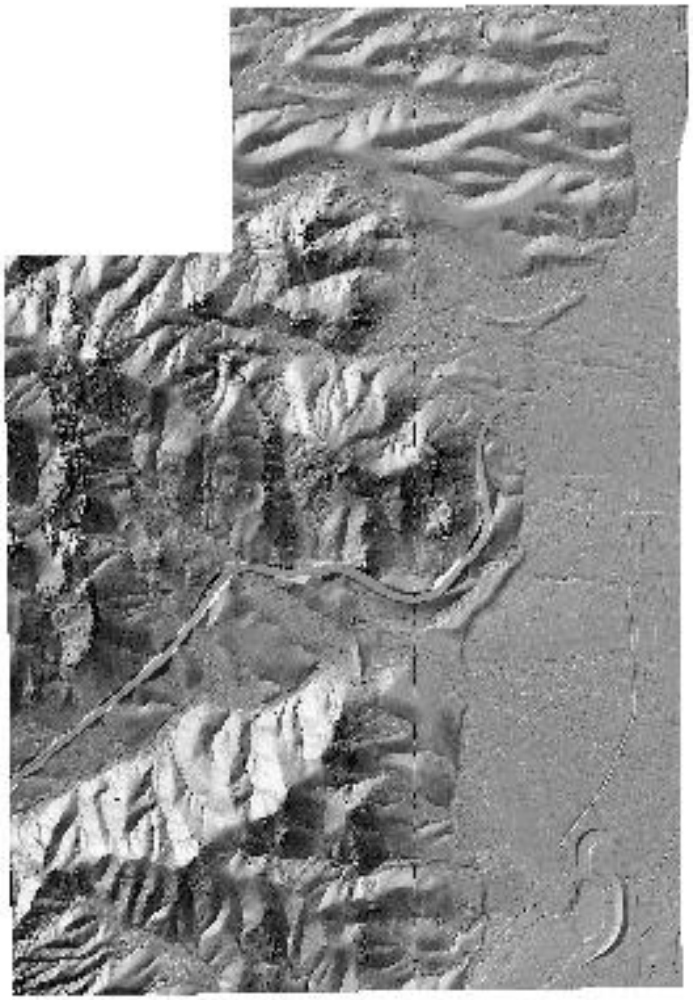
Lidar & Orthophotography

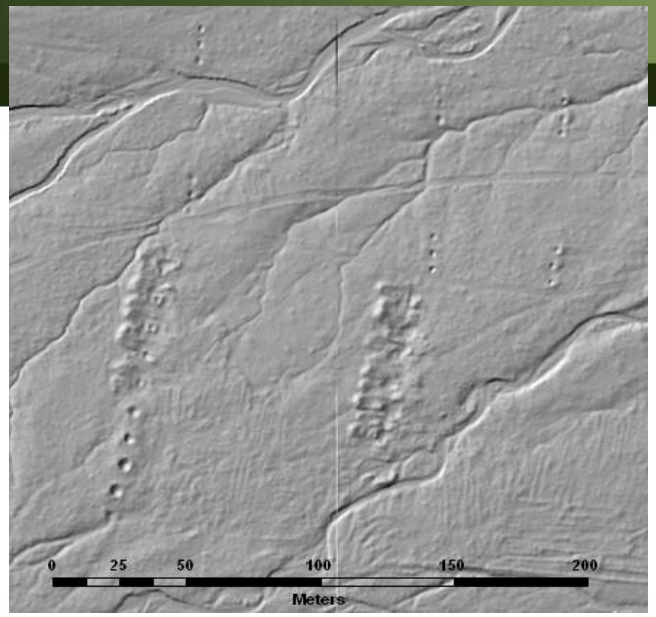
- Lidar at 20 points/m^2
- Analyzing two data sets
  - 20 points/m^2
  - 5 points/m^2
- Orthophotography at 10cm pixels
- Data acquired October 2009

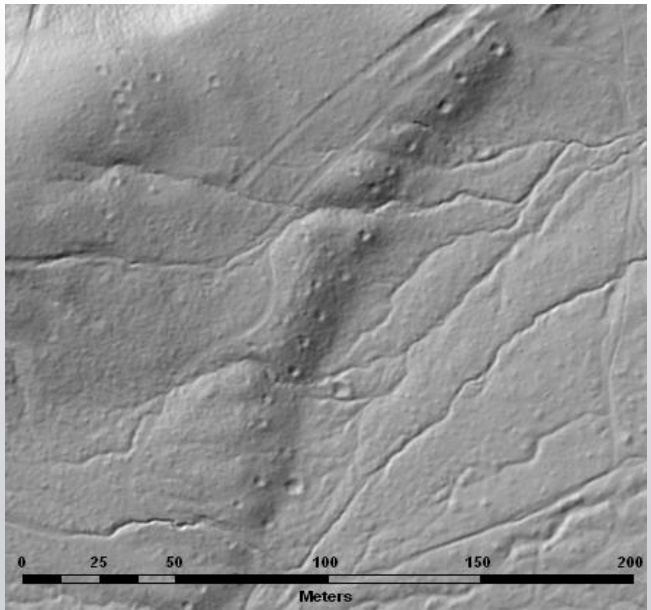


Crater and Fighting Positions

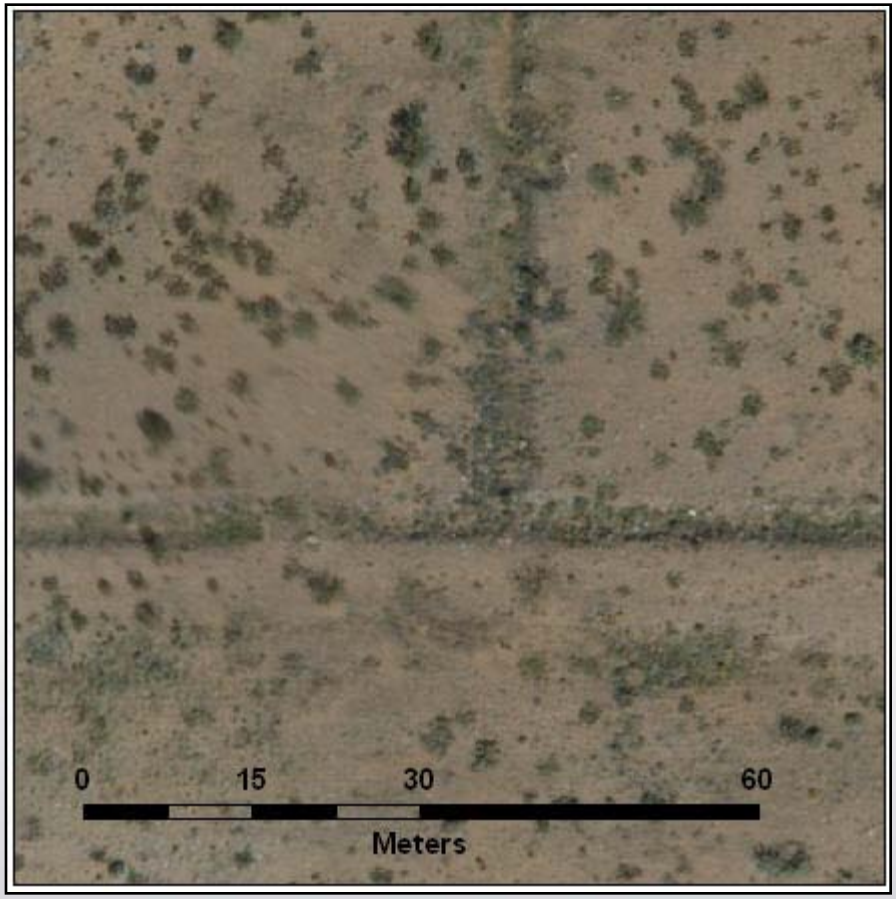
Lidar Surface Models

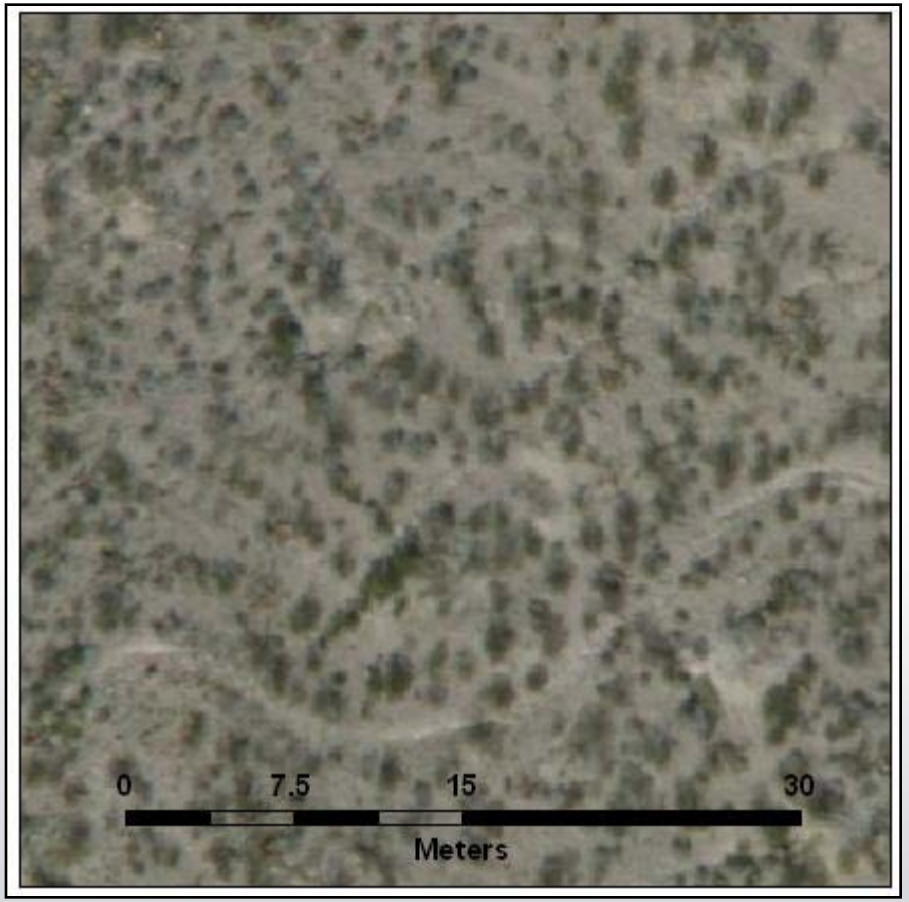






Orthophotos



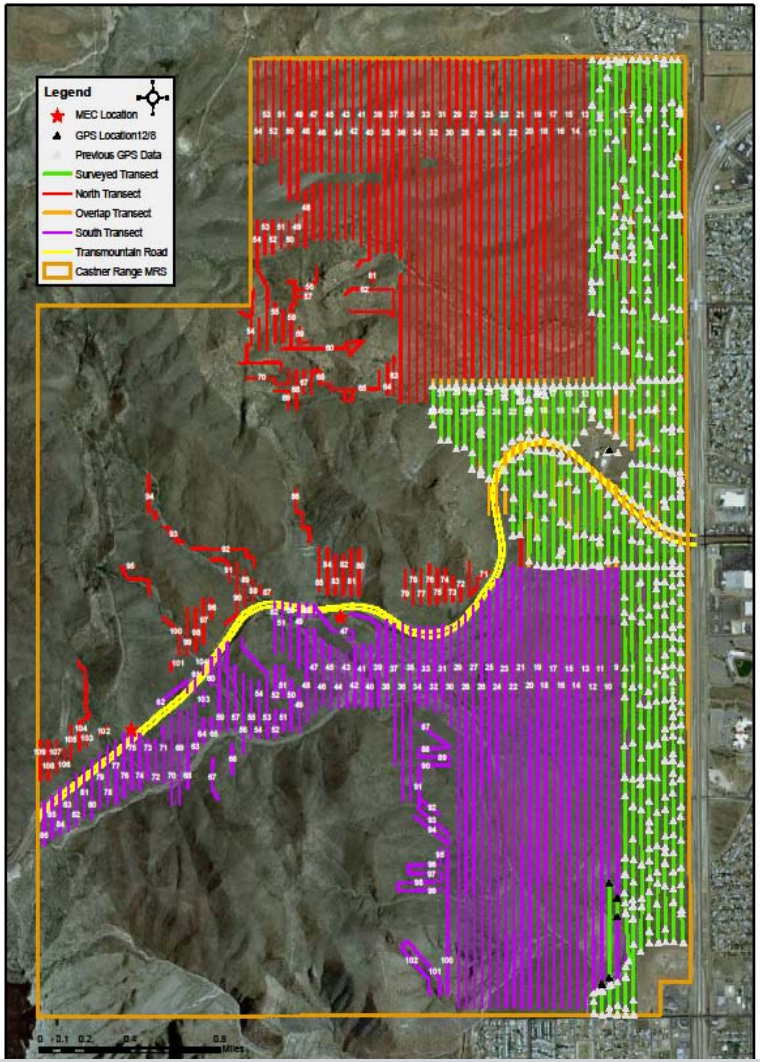


Site Preparation

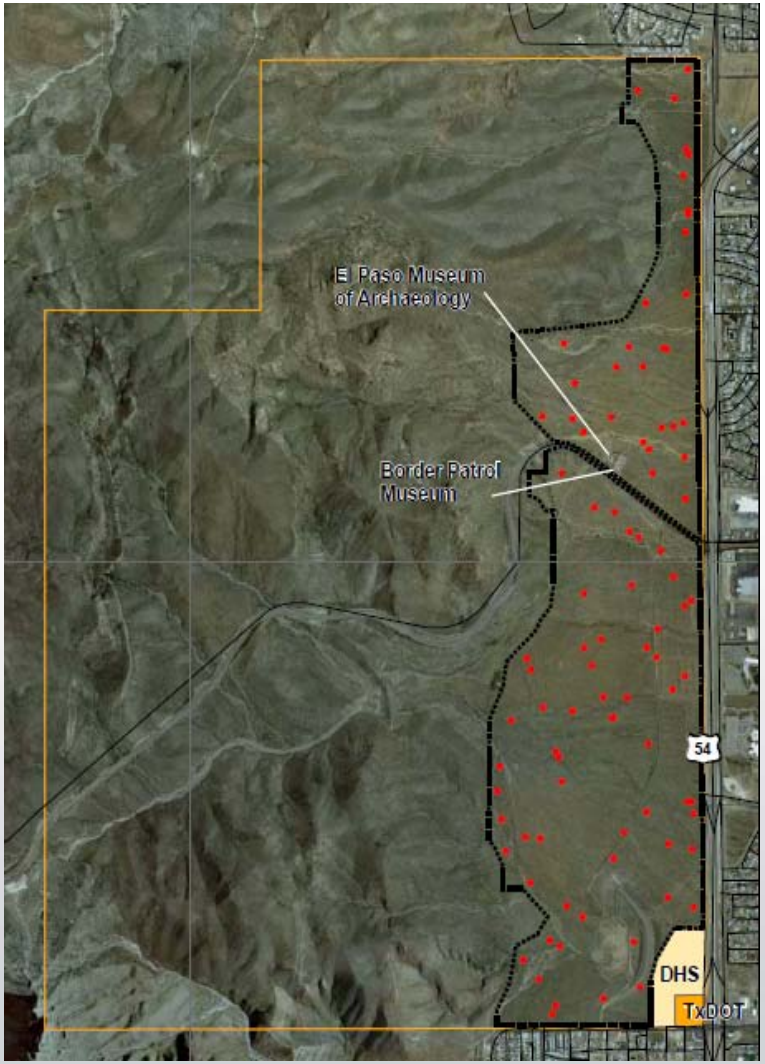
- Site Survey
- Installed Instrument Verification Site
- Establishing Transects
- Blind Production Seeds

Site Preparation

DGM Transects



Heli-mag Blind Seeds



Helicopter-Borne Magnetometry

- Flown 1 – 3 m above ground surface
- 7 magnetometer sensors will provide swath width of approx 9m
- Estimated characterized acres 1,577
- Approx 350-500 acres/day
- Scheduled 11 - 14 January 2010

What have we learned so far?

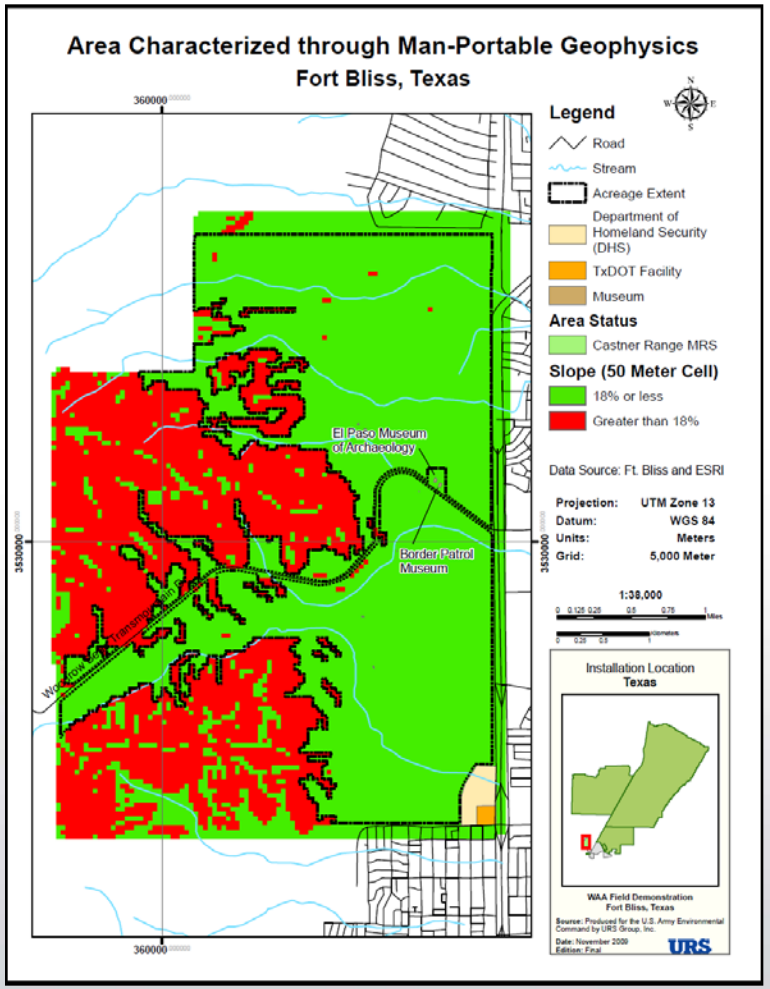
- Terrain is tougher than we thought (no towed-array; site survey very difficult)
- Lots of magnetic noise
- Lidar can see munitions related features
- Finding lots of munitions debris and cultural features

What is still to do?

- Ground-Based Geophysics
- Anomaly Reacquisition & Intrusive Investigation
- Report Writing

Ground-Based Geophysics

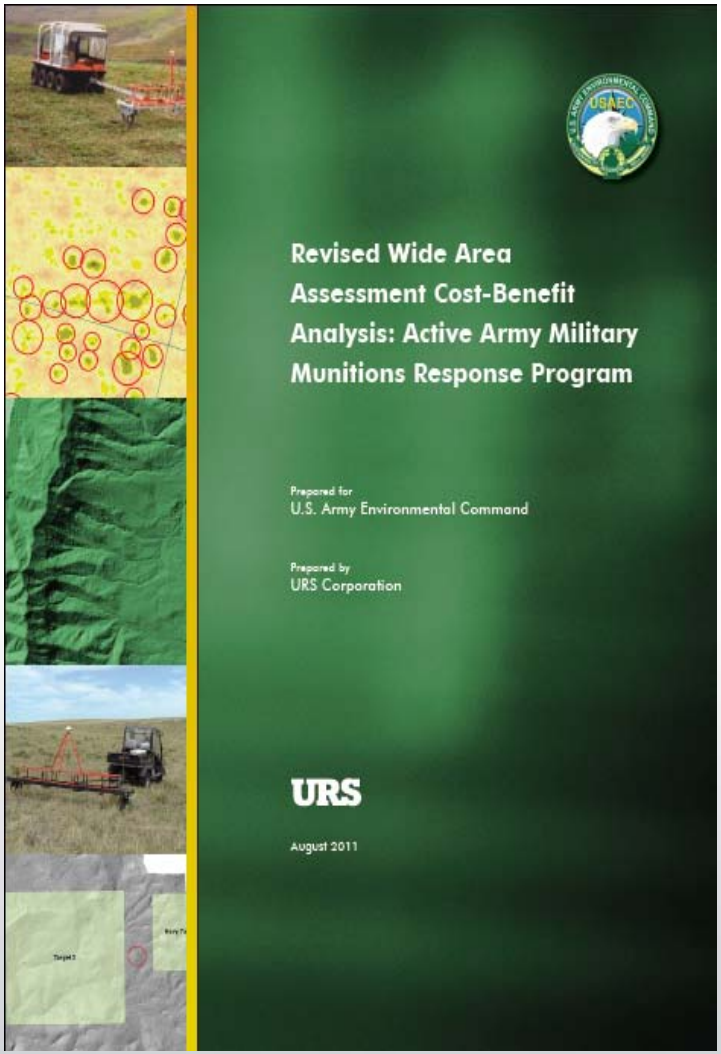
- Man-portable (litter-carried) EMI array with transect-based coverage
- Estimated characterized acreage is 4,020
- Approximately 1 million linear feet of transect
- Work scheduled February – April 2010

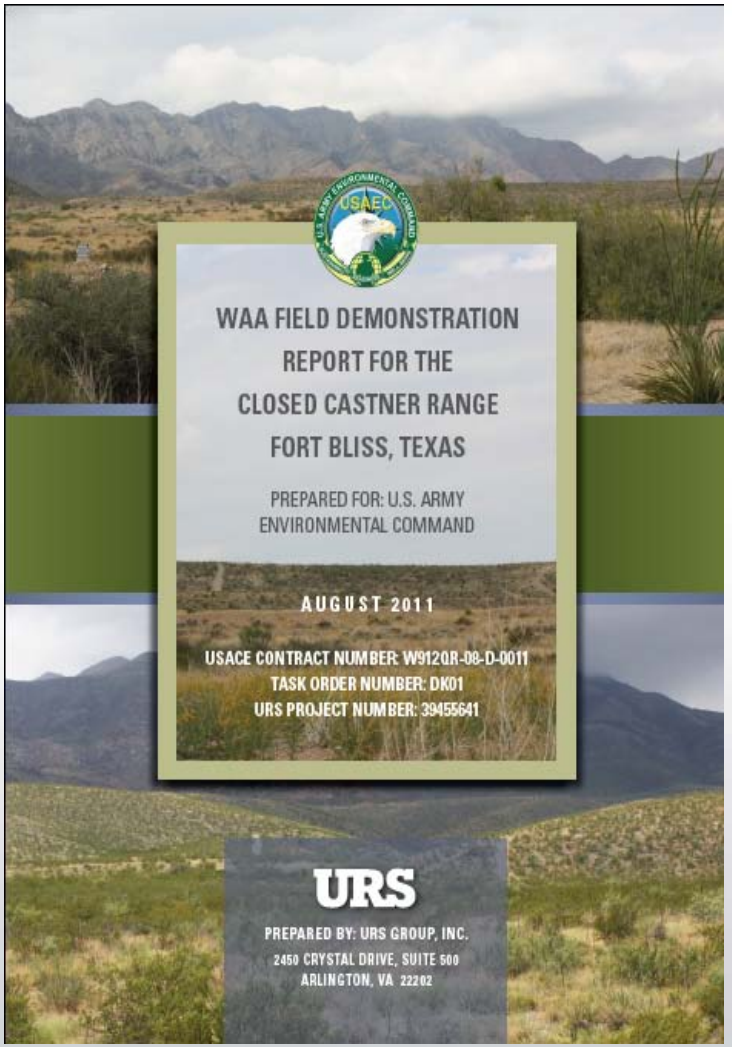


Anomaly Reacquisition & Intrusive Investigation

- Develop target lists (i.e., “dig sheets”) for the reacquisition of anomalies using data from Helicopter-Borne Magnetometry & Ground-Based Geophysics
- Graphically display anomalies on the geophysical transect maps
- Coordinate dig areas with Fort Bliss Environmental Staff to minimize disturbance of sensitive areas
- Section 106 Consultation through Fort Bliss Programmatic Agreement with continued consultation with the Tribes
- Excavate anomalies
  - If MEC, detonate using commercial explosives
  - If not MEC, manage as MPPEH (inspect, document as “safe”, dispose as scrap metal)
- Work scheduled October – December 2010

Reports


Revised Wide Area
Assessment Cost-Benefit
Analysis: Active Army Military
Munitions Response Program
Prepared for
U.S. Army Environmental Command
Prepared by
URS Corporation
URS
August 2011


WAA FIELD DEMONSTRATION
REPORT FOR THE
CLOSED CASTNER RANGE
FORT BLISS, TEXAS
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ENVIRONMENTAL COMMAND
AUGUST 2011
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Points of Contact

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- US Army Corps of Engineers, Omaha: Mr. Jerry Hodgson
- US Army Corps of Engineers, Huntsville: Mr. Andy Schwartz and Mr. Bill Veith
- URS: Ms. Victoria Kantsios and Mr. Brian Helmlinger

Questions