

**Experimental Cairo Testing and Evaluation  
of Mine and UXO Detectors ( ECTEMUD), 14-18 May, 2007.**

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The North Western Coast Region of Egypt was the theater of many decisive battles during the WWII . For more than sixty years the left over mines and explosive remnants of war ( ERW) have caused thousands of human casualties and blocked the development potential of this important part of the country. It is believed that millions of mines and unexploded ordnance (UXO) such as aircraft bombs, artillery projectiles and other ERW have been hidden over the years by sand at different depths. Meanwhile it is encouraging to notice the growing international concern over the damaging socio-economical effects of landmines and ERW to Egypt. Over the last two decades the world has seen a growth of humanitarian demining activities in many of the mine affected countries around the world .

The UNDP Mine Action Program in Egypt, was launched in January 2007 as a result of the agreement signed on 9 November 2006 with the UNDP. With the objective of deciding on which metal detectors to use in the demining activities, it was decided to organize in Egypt test trials for metal detectors manufactured by the five leading international manufacturers, CEIA, EBINGER, FOERSTER, MINELAB and VALLON . The test trials were conducted in the period 12-18 May 2007 at a specially designed and prepared test field in the vicinity of the 6<sup>th</sup> of October City, close to Cairo. The Egyptian Armed forces built all test lanes, supplied them with the required target mines and provided all services. The lane officers were staff members from Cairo University.

The following tests were performed:

1. Maximum detection depth in air (two suitable jigs were used).
2. Detector footprint ( spatial sensitivity profile) in air (a special tool was added to each jig).
3. Resolution of two nearby targets (two lanes with different types of clean soil).
4. Maximum detection depth in soil ( four 6 m x 1 m lanes with different types of clean soil : pure sand , sand with added hematite and black earth ).
5. Reliability test by regular metal detectors for two types of rendered-safe mines in eight lanes with soil similar to 4. above. In every lane, 24 mines were located within an active area of 24 m x 1 m. An area of 1 m x 1 m in each lane was dedicated to ground compensation and left free of targets.
6. Reliability test for detectors which are able to discriminate between different metallic objects. Two lanes similar to 5. above with the two target types in addition to artificial metallic clutter .
7. Maximum detection depth of metal cased mines and UXO located below a specially prepared ramp with a maximum height of two meters.

For the purpose of training local detectors and detector preparation , each company was offered four 4 m x 1 m lanes containing different soil types for training local deminers . A private tent for storage was also provided for each company.

More details on the test and the results obtained may be found at <http://www.itep.ws/reports/search1.php>.