



CASE STUDY

Cua Dat Irrigation Dam

Cua Dat Irrigation Dam is one of the largest irrigation dams in Vietnam. This concrete inspection survey was conducted by the Department of Geophysical Application Research - Institute of Ecology and Works Protection.

PROJECT:

Vucico Vietnam, a Representative for GSSI, assisted in a survey of the concrete dam which is part of the Cua Dat Reservoir. This reservoir, constructed between 2004 and 2009, is located upstream of the Chu River and contributes to flood control and ensures sufficient supply of water for agricultural, domestic and industrial use. The dam measures 1023m in length and 119m in maximum height.

SURVEY:

The scope of this survey was to scan the entire surface of the dam, and the work was conducted over the course of several years. Some of the work could only be done when the water in the Reservoir dropped to levels that provided access to the surface of the dam usually covered by water.



PHOTOS AND DATA COURTESY:
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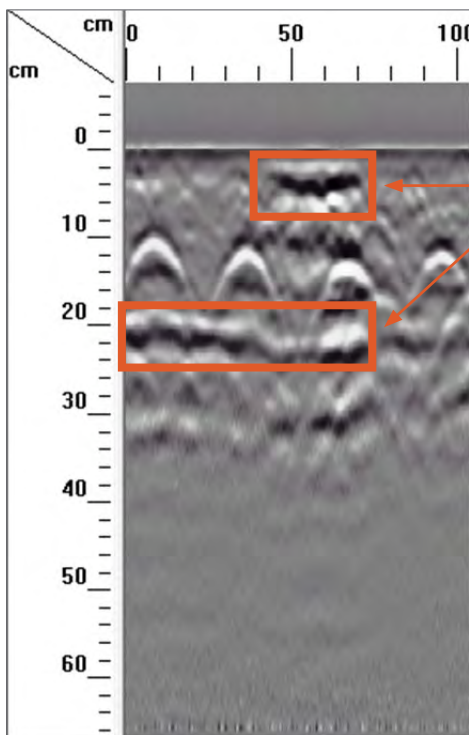
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RESULT:

A SIR_® 30 system and 900 MHz antenna were used in the first stage of the survey to locate any areas with possible voids. Any voids identified would be repaired by injecting concrete through a drill hole. The challenge was not to damage or destroy the existing rebar in the structure.

A StructureScan_™ Mini XT was then used to refine the survey area that required repair by examining the rebar locations and marking an area where it was safe to drill.



Post-processed GPR data (left) shows areas of possible voids.

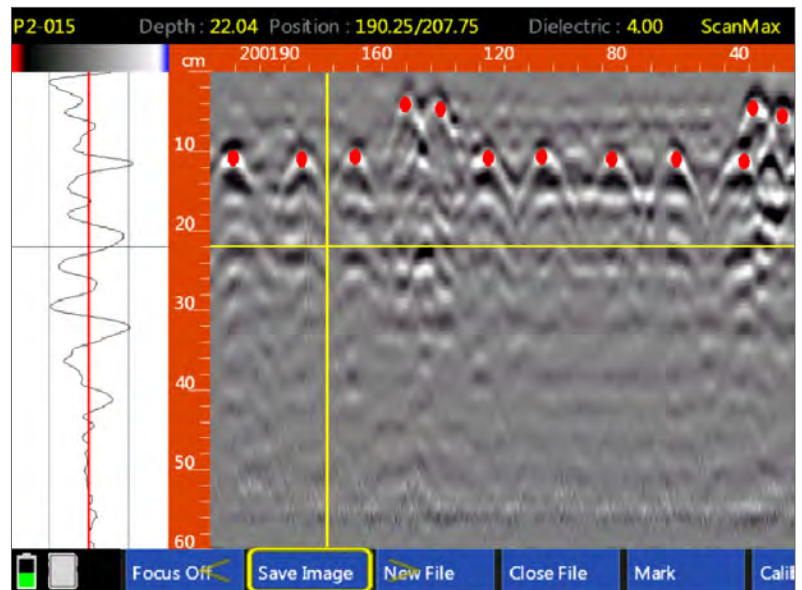
Data Collected with GSSI System:

- SIR_® 30
- 900 MHz antenna
- RADAN_® 7 software

GPR data image (right) shows location and depth of rebar reinforcement in concrete dam.

Data Collected with GSSI System:

- StructureScan_™ Mini XT



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